1988
OPERATING PERFORMANCE REPORT
for the
PHCP Wholesale/Distribution Industry
PVF Distributing Industry

(Based on 1987 Financial Data)

AMERICAN SUPPLY ASSOCIATION

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by

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For the sixth consecutive year, the ASA **Annual Operating Performance Report** was compiled, tabulated and analyzed by Industry Insights, Inc. in cooperation with the American Supply Association and key industry members.

Industry Insights, headquartered in Columbus, Ohio, is a professional research and consulting firm providing management and marketing services to trade and professional associations and their members. The company specializes in industry operating surveys, compensation studies, educational programs and customized research services.

(Additional copies of the report are available from the ASA office)
Just call (312) 236-4082

About This Report

This 1988 American Supply Association **Operating Performance Report of the P-H-C-P Wholesale/Distribution and P-V-F Distributing Industries** (based on 1987 financial data) represents the most complete, accurate and up-to-date data base of full-service plumbing, heating, cooling and piping (P-H-C-P) products wholesaler financial and operating results published anywhere. The information contained in this report is designed to provide easy-to-understand guidelines for identifying business performance improvement opportunities.

For the sixth consecutive year, the **Operating Performance Report** (OPR) was prepared by Industry Insights, Inc. of Columbus, Ohio, working closely with the American Supply Association staff. Confidential survey forms (refer to the Appendix for a sample) were sent to ASA members in late February and 327 completed and usable responses were received, representing the highest response ever for the study and one of the largest data bases of respondents among any wholesale/distribution industry. This strong response represents a 5.5% increase in participation as compared to the same study in 1987, and nearly a 15% increase over the past two years.

As in the past, this year's report includes comparative financial ratios and statistics by type of firm, sales volume size, high profit firms and geographic region. In addition, building upon the excellent historical information that has resulted from past ASA operating performance surveys, this year's study contains various seven year industry trend data, along with appropriate analysis. Such information is important for identifying shifts occurring within the industry which may be representative of future conditions.

Also featured in this year's report is an overall analysis of industry performance relative to U.S. economic conditions, including both sales and profitability results. In addition, as in the past, a listing of fiscal year-ends is included.

Perhaps the most valuable feature of the ASA **Operating Performance Report** is that **all** firms participating in the survey received, **absolutely free,** a confidential Company Performance Report. This report presents a company's own ratios and data computed in a manner consistent with those appearing in the industry report, and displayed alongside the appropriate industry comparatives. (A couple representative pages from a sample Company Performance Report are illustrated on the following page.)

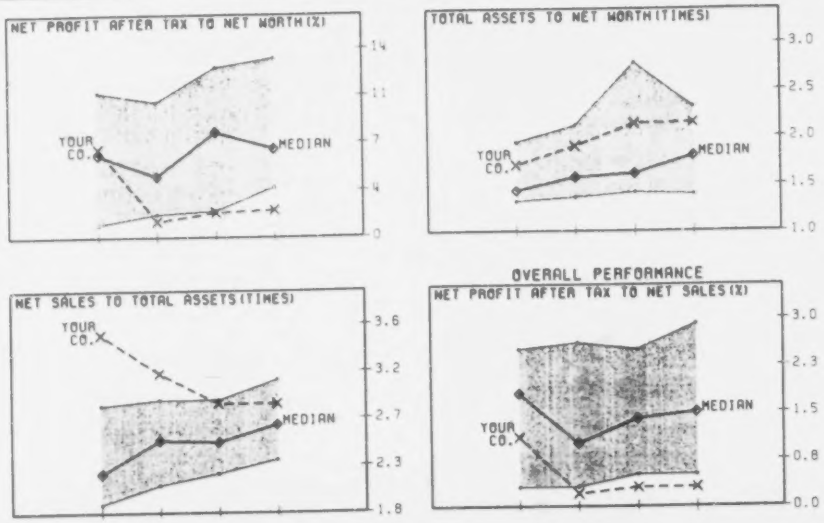
As shown on any given line of the Company Performance Report a firm's own data is included along with industry averages for firms of a comparative sales volume, type of business, geographic region, etc. Thus, the individual owner/manager is provided invaluable information without having to spend time and effort making the calculations manually. In addition, for any firm which participated in more than one consecutive ASA OPR study in recent years, the Company Performance Report includes multiple year **trend data** in graphical form. Also, once again, these highly confidential reports contain a computer-generated qualitative assessment of a company's situation, including some possible alternative courses of action.

SAMPLE

COMPANY PRODUCTIVITY REPORT

SUMMARY PERFORMANCE EVALUATION
Your Firm's Performance Compared to "All Similar Firms"

NET PROFIT AFTER TAX TO NET WORTH....(WEAK)
Return on net worth (RONW) is one overall measure of company profitability, expressing the percentage return earned on the owner's investment in the business.
Your firm's RONW was below the lower quartile performance level, suggesting that further investigation is warranted to determine where profit leaks are occuring. While you may conclude that no significant problems exist, suggested areas of review are asset turnover, profit margin, and financial leverage (the three basic components of RONW).



	Your Firm	HIGH PROFIT FIRMS TYPICAL	HIGH PROFIT FIRMS MIDDLE RANGE	YOUR REGION TYPICAL	YOUR REGION MIDDLE RANGE
Overall Performance					
Net Profit After Tax to Net Worth	2.04%	10.20%	7.36 - 17.78%	5.88%	2.53 - 14.07%
Total Assets to Net Worth	2.15 TIMES	1.65x	1.34 - 1.96x	1.92x	1.37 - 2.76x
Net Profit After Tax to Total Assets	0.95%	7.58%	4.51 - 9.38%	3.57%	1.07 - 5.73%
Net Sales to Total Assets	2.84 TIMES	2.66x	2.30 - 3.33x	2.55x	2.10 - 2.93x
Net Profit After Tax to Net Sales	0.33%	2.40%	1.50 - 3.40%	1.30%	0.50 - 1.90%
Net Profit Before Tax to Net Worth	3.06%	19.14%	12.89 - 27.42%	9.19%	3.37 - 20.49%
Net Profit Before Tax to Total Assets	1.42%	12.52%	7.16 - 16.28%	4.52%	1.61 - 9.52%
EBIT to Total Assets	3.70%	14.00%	8.28 - 17.33%	7.11%	4.07 - 9.74%
Sales Analysis					
Net Sales($000)	$2,450	$9,840	$6,542 - 14,644	$5,029	$2,562 - 10,672
Percent Sales Change from Prior Year	7.40%	8.98%	2.42 - 23.34%	8.07%	1.10 - 15.61%
Sales Mix:					
Direct Sales	12.1%	9.0%	4.8 - 13.3%	11.1%	3.6 - 13.6%
Warehouse Sales - Counter and Delivery	87.9%	91.0%	86.7 - 95.2%	88.9%	86.4 - 96.4%
TOTAL SALES	100.0%	100.0%	100.0 - 100.0%	100.0%	100.0 - 100.0%
Product Sales Mix					
Plumbing Supplies & Equipment	30.0%	43.0%	40.0 - 50.0%	43.1%	30.0 - 65.0%
Heating & Cooling Supplies & Equipment	%	21.4%	10.0 - 30.0%	12.5%	0.0 - 21.8%
Industrial P-V-F (Pipes-Valves-Fittings)	30.0%	28.3%	15.0 - 40.0%	23.8%	3.1 - 37.5%
Other Industrial Supplies & Equipment	30.0%	2.3%	0.0 - 5.0%	5.4%	0.0 - 8.9%
Other Products	10.0%	5.0%	0.0 - 10.0%	15.2%	0.0 - 28.8%
TOTAL SALES	100.0%	100.0%	100.0 - 100.0%	100.0%	100.0 - 100.0%
Gross Margin					
Gross Margin on Net Sales	24.9%	24.7%	22.3 - 27.1%	25.2%	21.4 - 28.7%
Gross Margin on Direct Shipments	11.8%	13.8%	10.0 - 18.8%	11.6%	8.3 - 13.5%
Gross Margin on Warehouse Sales	26.7%	24.6%	23.4 - 28.1%	25.3%	23.3 - 29.6%
Asset and Financial Management					
Current Asset Turn (Sales/Current Assets)	3.17 TIMES	3.25x	2.88 - 3.59x	2.84x	2.43 - 3.49x
Total Debt to Net Worth	115.1%	64.8%	34.0 - 95.9%	86.9%	36.2 - 166.4%
Current Debt to Net Worth	81.1%	42.2%	28.9 - 82.7%	60.8%	30.7 - 109.8%

Wouldn't it be great to track your firm's performance month-to-month and compare your results to industry averages?

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Your Desktop Financial Partner

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- If you are as profitable as you should and can be.
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- If your firm is financially strong.
- If your receivables are well-managed.

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☐ I need ProfiTrak now. Enclosed is my check or money order, computed as follows:

$_____ Association Member Price ($195)
$_____ Non-Member Price ($295)
$ 3.50 Shipping & Handling
$_____ Ohio residents add 5.5% Sales Tax
$_____ TOTAL

☐ I am very interested, but I have some questions. Please call me.

☐ YES, I participated in the OPR Survey.

☐ NO, I did not participate in the Survey.
My Sales Volume is:
____ Under $3 million
____ $3 - $7 million
____ $7 - $12 million
____ Over $12 million

My Product Category is:
____ Plumbing Supplies & Equipment
____ Industrial P-V-F
____ Plumbing Supply & Industrial P-V-F
____ HVAC or other

Please check one:
____ 3-1/2" diskette
____ 5-1/4" diskette

Name/Title: _____

Company Name: _____

Shipping Address: _____

City/State/Zip: _____

Business Phone: _____

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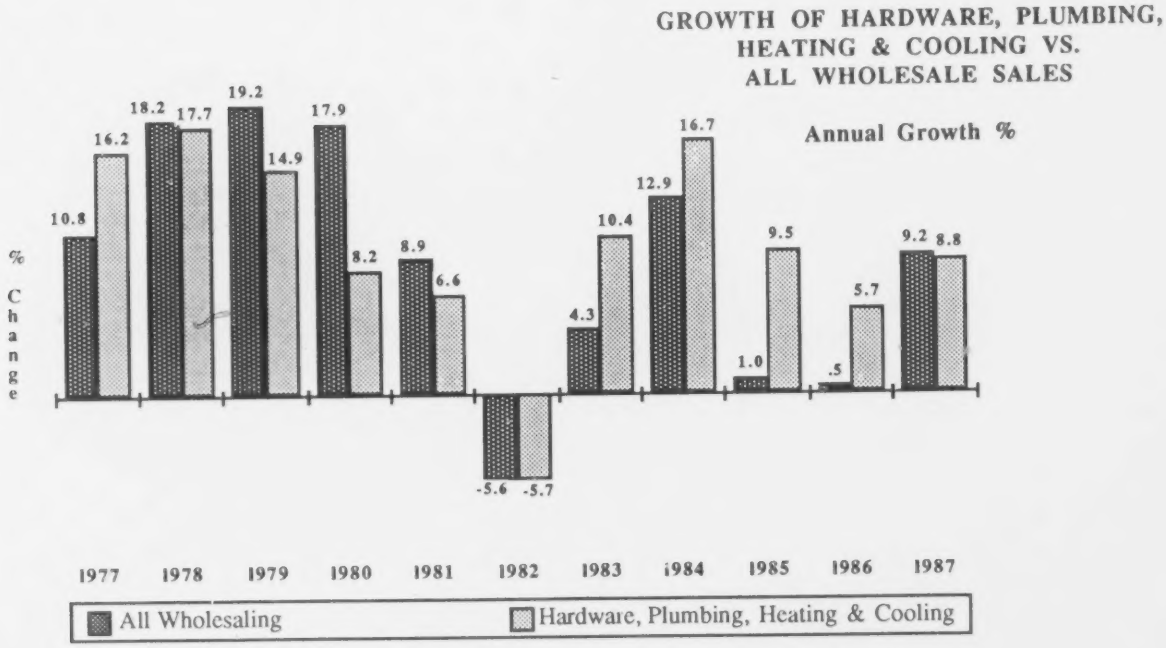
P-H-C-P Wholesaling--Overview of 1987 Industry Performance

Economic growth in the overall economy, as measured by changes in "real" (or inflation adjusted) Gross National Product (GNP) continued at a moderate pace during 1987. For the third consecutive year, real GNP advanced by just under 3% as compared to the prior year. Most of this was due to a strong fourth quarter finish. Economists are projecting continued positive, but sluggish growth for most of 1988.

1987 P-H-C-P WHOLESALING SALES PERFORMANCE

The sales of wholesalers of hardware, plumbing, heating, air conditioning and refrigeration equipment outpaced the growth of the economy as a whole during 1987 and kept pace with the strong growth performance of wholesalers in general. As shown in the graph below, based on U.S. Census Bureau figures, hardware, plumbing, heating, air conditioning and refrigeration equipment wholesalers as a group as well as wholesalers in general reported sales advances of around 9% (8.8% and 9.2%, respectively).



In contrast to census figures, ASA members responding to this year's survey reported an 11.0% sales increase over 1986 volume levels, up from the 8.2% gain reported for 1986 (over 1985 level). Firms with a strong commitment to both plumbing and industrial P-V-F showed the best 1987 growth (13.8%) closely followed by Industrial P-V-F firms (13.5%).

1987 MEDIAN SALES GROWTH

ALL P-H-C-P WHOLESALERS	**11.0%**
BY PRODUCT EMPHASIS	
Plumbing Equipment and Supplies	9.3%
Industrial Pipes-Valves-Fittings (P-V-F)	13.5
Plumbing and Industrial P-V-F	13.8
HVAC and Other Emphasis	11.1
BY SALES VOLUME	
Plumbing Equipment & Supplies:	
Sales Less than $3 Million	5.2%
Sales $3 Million to $7 Million	7.0
Sales $7 Million to $12 Million	4.8
Sales Over $12 Million	15.5
Industrial P-V-F:	
Sales Less than $4 Million	19.0%
Sales $4 Million to $12 Million	8.4
Sales Over $12 Million	15.7
Plumbing and Industrial P-V-F:	
Sales Less than $3 Million	3.5%
Sales $3 Million to $7 Million	11.2
Sales Over $7 Million	18.8
HVAC and Other Emphasis:	
Sales Less than $3 Million	3.5%
Sales $3 Million to $8 Million	11.4
Sales Over $8 Million	12.2

1987 PROFITABILITY PERFORMANCE

The overall profitability of P-H-C-P wholesalers improved in 1987 along with the higher sales growth. Return on net worth (after tax) for the typical industry firm was 9.8%, up from 8.1% in 1986. As was the case in 1986, "HVAC and Other Emphasis" firms were the most profitable in 1987 (10.3% return on net worth) while "Plumbing Supplies and Industrial P-V-F Firms" were the least profitable (8.9% return on net worth). Most significantly, *all four product emphasis groups improved their return on net worth in 1987 as compared to 1986.*

1987 MEDIAN RETURN ON NET WORTH

All P-H-C-P Wholesalers	**9.8%**
BY PRODUCT EMPHASIS	
Plumbing Equipment and Supplies	**10.2%**
Industrial Pipes-Valves-Fittings (P-V-F)	**9.8**
Plumbing and Industrial P-V-F	**8.9**
HVAC and Other Emphasis	**10.3**
BY SALES VOLUME	
Plumbing Equipment & Supplies:	
Sales Less than $3 Million	**8.7%**
Sales $3 Million to $7 Million	**11.1**
Sales $7 Million to $12 Million	**10.6**
Sales Over $12 Million	**11.1**
Industrial P-V-F:	
Sales Less than $4 Million	**12.4%**
Sales $4 Million to $12 Million	**10.0**
Sales Over $12 Million	**9.2**
Plumbing and Industrial P-V-F:	
Sales Less than $3 Million	**6.6%**
Sales $3 Million to $7 Million	**8.9**
Sales Over $7 Million	**14.2**
HVAC and Other Emphasis:	
Sales Less than $3 Million	**8.6%**
Sales $3 Million to $8 Million	**8.4**
Sales Over $8 Million	**10.5**

P-H-C-P Wholesaling (1978-1987)

Over the ten year period from 1978-1987 the sales of hardware, plumbing, heating and cooling wholesalers has grown at a compound annual rate of 9.0% (based on information provided by the U.S. Bureau of the Census). This rate has exceeded that of all wholesale trade (8.4%) but has been approximately equal to the pace of durable goods wholesaler growth.

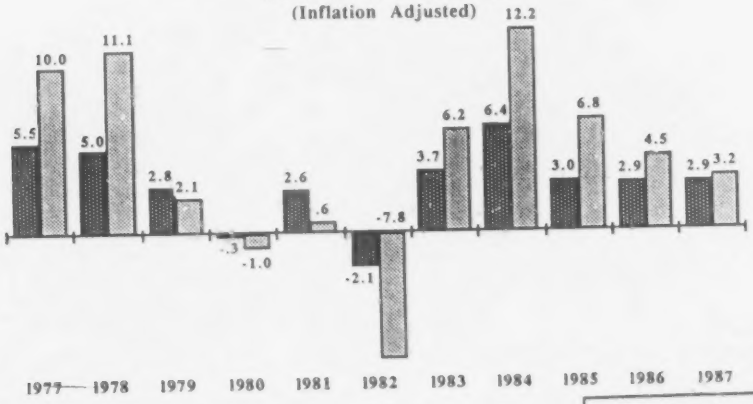
Annual Wholesale Sales Growth (%)
1978-1987

All Wholesale Trade	**8.4**
All Durables Wholesalers	**9.3**
Electrical Goods	**12.2**
Motor Vehicles & Automotive Equipment	**10.4**
Furniture & Home Furnishings	**8.3**
Machinery, Equipment & Suppliers	**8.6**
Hardware, Plumbing & Heating Equipment	**9.0**

Source: U.S. Bureau of the Census

It is interesting to note the pattern of growth among hardware, plumbing and heating wholesalers over the past ten years as compared to that of the economy in general. As shown in the graph below, a close similarity exists between the two, indicating how closely the hardware, plumbing and heating wholesalers business is aligned to economic growth in the overall economy. For example, during the recession years of 1980 and 1982, hardware, plumbing and heating wholesalers were also in a recession. Likewise, when the economy rebounded in 1983 and 1984, so did our industry wholesalers, and since 1984 the industry has experienced moderate but steady growth, just like the overall economy.

REAL GROWTH OF HARDWARE, PLUMBING, HEATING & COOLING WHOLESALE SALES VS. REAL GNP GROWTH
(Inflation Adjusted)



Source: U.S. Department of Commerce, Bureau of the Census

Real GNP Growth
Real Growth of Hardware, Plumbing, Heating & Cooling Wholesalers

How to Use This Report

The 1987 ASA **Operating Performance Report of the P-H-C-P Wholesaler/Distribution and P-V-F Distributing Industries** has been designed to help wholesalers evaluate their own performance relative to that of similar companies in order to identify improvement opportunities. The statistics in this report represent broad performance *"yardsticks"* against which a company's performance can be measured.

Using this information P-H-C-P and P-V-C wholesalers can compare their own firm's financial and operating performance with: the industry as a whole; with firms having the same general product emphasis; with firms of a comparable sales volume and/or geographic region; and with the highest profit firms. Spotting significant differences between your own firm's performance and the industry composites can be the first step toward improving performance. Keep in mind. however, that deviations from industry norms do not automatically call for some action on your part. The most important thing to do is to be able to explain why your firm experienced significant deviations from the *"typical"* wholesaler in the industry.

In order to obtain maximum advantage from the information contained in this report while at the same time minimizing your analysis time and effort, we recommend you follow the step-by-step approach outlined below.

Step 1: Collect the Necessary Company Data

The first step in using this report is to gather all your financial and operating results for your 1987 fiscal year. Most of the needed data can be obtained from your company accounting records, but a small amount will have to be extracted from other sources, such as personnel files, advertising records and the like. If you participated in the 1988 ASA **Operating Performance Survey**, this step has probably already been done.

Step 2: Calculate the Ratios

The second step is to compute all of the various performance measures for your firm that are included in this report using the data gathered in Step 1. **It is extremely important to calculate these ratios using the same formulas which were used to produce the ratios in this report.** These formulas, along with sample calculations of each measure, appear in the section of this report entitled, "Ratio Definitions and Sample Calculations," located in the Appendix.

Companies which participated in the survey and filled the survey form out completely received, **absolutely free,** a confidential Company Performance Report of their own firm's financial ratios calculated and formatted in a manner that is consistent with the information in this report. Thus, for those firms, Step 2 has already been completed for them in an accurate, time saving manner. P-H-C-P wholesalers that did not participate in the 1988 survey should strongly consider doing so in the future.

Step 3: Compare the Results

Next, compare your company's performance with the survey results of other firms in the industry. As you do so, several points should be recognized:

1. *A deviation between your firm's figures (for any performance measure) and numbers in the report is not necessarily good or bad. It merely indicates that additional analysis may be required.* As a rule, the larger the difference, the greater the need for further investigation.

2. In situations where large deviations do exist, it may be helpful to go back and calculate the same performance measure over the past several years to identify any trends that may exist.

3. The information in this report should be used as tools for informed decision making rather than absolute standards. Since firms differ as to their product emphasis strategy, location, size, and other factors, any two firms can be successful, yet have very different experiences with regard to certain performance measures.

UNDERSTANDING THE DATA

In order to use the information in this report to maximum advantage, it is important to understand *what the numbers mean* and *how to interpret them.*

How the Tables are Organized

The tables in this report are organized to include a number of important financial ratios for each relevant "grouping" of similar firms. In particular, the major "groupings" used include:

- All Reporting Firms--refers to the results of all firms responding to the survey.
- Product Emphasis Group:
  - Plumbing Supplies & Equipment Firms--those firms that derive over 50% of sales from plumbing products.
  - Industrial P-V-F Firms--those firms that derive over 50% of sales from Industrial P-V-F products.
  - Plumbing Supplies & Equipment and Industrial P-V-F Firms--those firms that derive more than 50% of sales from plumbing and industrial P-V-F products combined but less than 50% from either category along.
  - HVAC & Other Emphasis Firms--those firms that cannot be classified in any of the above three groups; or those companies which derive less than 50% of sales from combined plumbing supplies and equipment, and industrial P-V-F.
- Product Emphasis Group by Sales Volume Size:
  - Plumbing Supplies & Equipment Firms--All Reporting Firms
  - Plumbing Supplies & Equipment Firms--Sales Under $3 Million

- Plumbing Supplies & Equipment Firms--Sales $3-$7 Million
- Plumbing Supplies & Equipment Firms--Sales $7-$12 Million
- Plumbing Supplies & Equipment Firms--Sales Over $12 Million

- Industrial P-V-F Firms--All Reporting Firms
- Industrial P-V-F Firms--Sales Under $4 Million
- Industrial P-V-F Firms--Sales $4-$12 Million
- Industrial P-V-F Firms--Sales Over $12 Million

- Plumbing Supplies & Industrial P-V-F Firms--All Reporting Firms
- Plumbing Supplies & Industrial P-V-F Firms--Sales Under $3 Million
- Plumbing Supplies & Industrial P-V-F Firms--Sales $3-$7 Million
- Plumbing Supplies & Industrial P-V-F Firms--Sales Over $7 Million

- HVAC & Other Firms--All Reporting Firms
- HVAC & Other Firms--Sales Under $3 Million
- HVAC & Other Firms--Sales $3-$8 Million
- HVAC & Other Firms--Sales Over $8 Million

- By Regional Association Affiliation:

  - PHWNE (CT, ME, MA, NH, RI, VT)
  - NYSPHW (NY, Excluding New York City)
  - JCA (Long Island and Metro New York)
  - MAWA (DE, E. PA, MD, NJ, DC)
  - CWA (IN, OH, W. PA, WV)
  - SWA (AL, FL, GA, KY, MS, NC, SC, TN, VA)
  - MAD (MI, excluding Upper MI)
  - Metro Chicago, Northern IL
  - MASA (IA, KS, MN, MO, NE, ND, SD, Upper MI, WI, Southern IL)
  - WDA (LA, TX, NM, OK, AR, CO)
  - WSA (ID, MT, WY, AK, OR, WA, HI, Northern CA, Northern NV)
  - PSDA (AZ, Southern CA, Southern NV, UT)

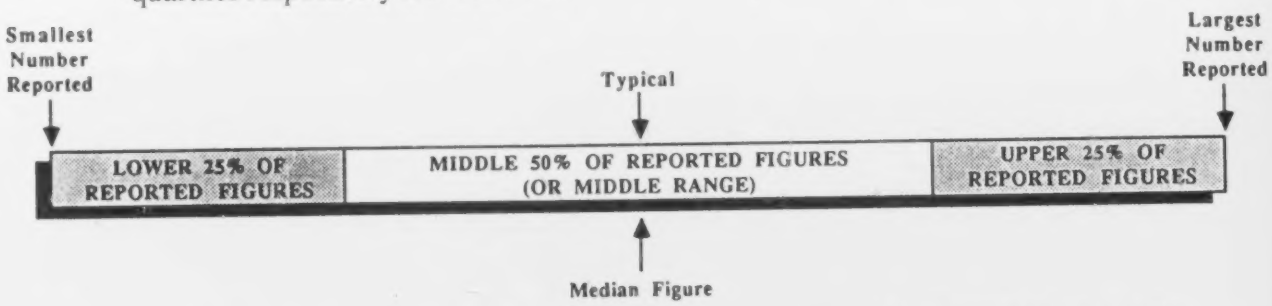
- By Product Emphasis Group by High Profit Firms (refers to the upper quartile performers based on Before Tax Return on Assets):

  - High Profit Plumbing Supplies & Equipment Firms
  - High Profit Industrial P-V-F Firms
  - High Profit Plumbing Supplies & Equipment and Industrial P-V-F Firms
  - High Profit HVAC & Other Emphasis Firms

INTERPRETING THE NUMBERS

Most of the performance indicators included in this study are reported on the basis of medians rather than arithmetical averages or means. Unlike the mean, the median is not distorted by a few unusually high or low values that may exist in the sample due to special circumstances. The "median" figure represents the mid-point of the figures for a particular measure, with one-half of the firms reporting figures above it and one-half below. Each median was computed independently based on the companies which reported for that item. As a result, **relationships do not always exist** when different ratios are used together in the calculation. For example, the median net sales minus the median cost of goods sold may not necessarily equal the median gross margin percent.

Also included for most of the performance indicators is the "Middle Range." This represents the experience of the middle 50 percent of all firms in the data grouping when items are arranged numerically from lowest to highest. In other words, the upper and lower limits on the "Middle Range" are simply the upper and lower quartiles respectively for that ratio.



Figures reported by responding members were not used unless they were in accordance with the survey instructions and definitions. In cases where the number of companies reporting was considered inadequate for the computation of a meaningful figure, blank spaces appear in the tables, or an "insufficient data" notation is included.

Further insights into how to use this report are included in the Appendix in the section entitled: "Ratio Definitions and Sample Calculations." An important point to keep in mind when using this report is that *even relatively simple analysis of your company's own financials using the industry data for comparison can yield important insights into your business. You do not have to be a financial expert to benefit from this information.*

1988 ASA OPERATING PERFORMANCE SURVEY

DETAILED RESULTS

Executive Summary of Survey Results

As in past years, the 1988 ASA **Operating Performance Report** (for the P-H-C-P Wholesale/Distribution and P-V-F Distributing Industries) is organized as a detailed set of easily referenced industry performance tables (provided on pages 41 through 162 of this report). These are divided into four primary sections corresponding to the major product emphasis groups in the industry, including:

- Plumbing Supplies and Equipment Firms
- Industrial P-V-F Firms
- Plumbing Supplies and Industrial P-V-F Firms
- HVAC and Other Emphasis Firms

In using this study to evaluate your own company's performance, you should refer to the section which most closely corresponds to your firm's operation. This detailed information should be kept handy and referenced from time-to-time as a tool for better controlling your business.

While the comprehensive tables included in this report are designed to serve as an ongoing reference tool, important insights can be learned about the overall industry operating performance experienced during 1987. Even more importantly, the industry performance results for 1987 can be compared to that which was achieved in prior years in order to identify any trends that may have occurred. This is useful for understanding not only where the industry has been, but also for anticipating the future direction of the P-H-C-P wholesale/distribution business.

Some highlights of this year's survey results are provided below as well as insights regarding key patterns of change during the 1981-87 period.

SEVEN-YEAR TREND PERFORMANCE COMPARISON, 1981-1987

On the next several pages is a series of summary performance tables that compare P-H-C-P wholesaler performance over the past seven years in the key areas of productivity, financial management, accounts receivable, expenses, profitability, and sales growth. Some key insights from this data are highlighted below.

PRODUCTIVITY MANAGEMENT

An important determinant of high profitability in P-H-C-P wholesale distribution is the effectiveness and efficiency with which a company operates. In each of the past seven years that the **Operating Performance Report** has been prepared, invariably the most productive firms are also the most profitable, regardless of sales volume size, type of product emphasis, geographic region, economic conditions and/or other factors.

As a general rule, the productivity areas that tend to be most critical for company success are inventory and personnel. For the typical firm, inventory represents

PLUMBING SUPPLIES & EQUIPMENT FIRMS

SEVEN-YEAR SUMMARY PERFORMANCE COMPARISON
1981-1987

	1987	1986	1985	1984	1983	1982	1981
Financial Management							
Total Debt to Net Worth	109.8%	106.9%	92.8%	90.7%	85.8%	68.9%	78.1%
Current Assets Minus Inventory to Current Debt	1.0x	1.1x	1.0x	1.0x	1.0x	1.3x	1.1x
Personnel Productivity							
Net Sales/Employee	$203,256	$196,208	$195,342	$189,182	$171,166	$158,548	$162,470
Payroll and Fringe Benefits to Net Sales	12.6%	13.1%	13.2%	13.5%	13.7%	14.1%	13.8%
Inventory Management							
Gross Margin on Net Sales	24.7%	24.1%	24.3%	24.3%	24.3%	25.0%	24.4%
Cost of Warehouse Goods Sold to Average Inventory	3.6x	3.9x	3.7x	3.8x	3.7x	3.3x	3.5
Total Cost of Goods Sold to Average Inventory	4.1x	4.1x	4.0x	4.2x	4.1x	3.7x	4.2x
Warehouse Gross Margin Return on Inventory	129%	124%	118%	126%	124%	113%	127%
Accounts Receivable							
Average Collection Period (Days)	51	48	48	49	50	50	44
Expense Management							
Total Operating Expenses as a Percent of Sales	22.6%	22.3%	21.4%	21.3%	21.8%	22.7%	21.6%
Sales Performance							
Percent Sales Change from Prior Year	9.3%	9.4%	9.8%	14.7%	18.1%	-3.1%	0.5%

INDUSTRIAL P-V-F FIRMS

SEVEN-YEAR SUMMARY PERFORMANCE COMPARISON
1981-1987

	1987	1986	1985	1984	1983	1982	1981
Financial Management							
Total Debt to Net Worth	104.6%	80.7%	84.1%	74.4%	83.9%	83.3%	64.2%
Current Assets Minus Inventory to Current Debt	1.0x	1.2x	1.0x	1.1x	1.1x	1.2x	1.0x
Personnel Productivity							
Net Sales per Employee	$210,031	$205,236	$218,040	$197,975	$196,923	$201,377	$198,150
Payroll and Fringe Benefits to Net Sales	14.7%	14.6%	15.9%	14.4%	14.1%	13.9%	12.9%
Inventory Management							
Gross Margin on Sales	26.8%	27.4%	27.1%	25.7%	24.4%	23.4%	25.1%
Cost of Warehouse Goods Sold to Average Inventory	3.5x	3.3x	3.3x	3.2x	3.1x	2.7x	3.0x
Total Cost of Goods Sold to Average Inventory	4.6x	4.2x	4.1x	4.2x	3.6x	3.7x	3.4x
Warehouse Gross Margin Return on Inventory	143%	127%	127%	121%	109%	95%	111%
Accounts Receivable							
Average Collection Period (Days)	48	43	43	48	51	40	40
Expense Management							
Total Operating Expenses as a Percent of Sales	24.6%	25.3%	23.1%	22.2%	23.6%	22.0%	20.6%
Sales Performance							
Percent Sales Change from Prior Year	13.5%	0.1%	9.5%	20.1%	-6.8%	-11.7%	3.6%

PLUMBING SUPPLIES & EQUIPMENT & INDUSTRIAL
P-V-F FIRMS

SEVEN-YEAR SUMMARY PERFORMANCE COMPARISON
1981-1987

	1987	1986	1985	1984	1983	1982	1981
Financial Management							
Total Debt to Net Worth	75.7%	73.4%	79.9%	61.7%	56.7%	42.5%	52.3%
Current Assets Minus Inventory to Current Debt	1.1x	1.1x	1.2x	1.3x	1.4x	1.5x	1.4x
Personnel Productivity							
Net Sales per Employee	$202,179	$189,599	$191,710	$191,422	$167,513	$152,807	$157,900
Payroll and Fringe Benefits to Net Sales	14.4%	14.9%	14.2%	13.7%	14.3%	15.3%	14.2%
Inventory Management							
Gross Margin on Sales	24.8%	25.9%	24.8%	23.7%	24.1%	25.2%	24.5%
Cost of Warehouse Goods Sold to Average Inventory	3.9x	3.7x	3.7x	3.4x	3.4x	2.8x	3.1x
Total Cost of Goods Sold to Average Inventory	4.2x	4.4x	4.5x	4.1x	4.0x	3.6x	3.9x
Warehouse Gross Margin Return on Inventory	125%	130%	127%	111%	108%	106%	114%
Accounts Receivable							
Average Collection Period (Days)	48	54	51	48	49	46	47
Expense Management							
Total Operating Expenses as a Percent of Sales	22.3%	23.6%	21.7%	21.3%	22.7%	24.7%	21.2%
Sales Performance							
Percent Sales Change from Prior Year	13.8%	8.3%	7.3%	14.2%	12.7%	-3.7%	2.8%

HVAC & OTHER EMPHASIS FIRMS

SEVEN-YEAR SUMMARY PERFORMANCE COMPARISON
1981-1987

	1987	1986	1985	1984	1983	1982	1981
Financial Management							
Total Debt to Net Worth	106.5%	92.5%	78.9%	83.8%	87.1%	92.7%	102.1%
Current Assets Minus Inventory to Current Debt	.9x	.9x	1.0x	1.0x	1.0x	1.1x	1.0x
Personnel Productivity							
Net Sales per Employee	$184,982	$177,161	$166,551	$164,970	$144,910	$133,715	$133,470
Payroll and Fringe Benefits to Net Sales	12.5%	12.6%	12.7%	13.9%	14.3%	15.1%	15.6%
Inventory Management							
Gross Margin on Sales	25.1%	24.5%	25.2%	24.9%	26.2%	26.1%	26.1%
Cost of Warehouse Goods Sold to Average Inventory	3.4x	3.3x	3.1x	3.3x	2.8x	3.3x	3.1x
Total Cost of Goods Sold to Average Inventory	3.8x	3.7x	3.4x	3.9x	3.4x	3.4x	3.5x
Warehouse Gross Margin Return on Inventory	110%	113%	109%	118%	102%	111%	118%
Accounts Receivable							
Average Collection Period (Days)	45	46	46	46	49	50	43
Expense Management							
Total Operating Expenses as a Percent of Sales	22.0%	22.3%	22.9%	22.3%	23.5%	25.1%	23.5%
Sales Performance							
Percent Sales Change from Prior Year	11.1%	10.9%	7.9%	14.6%	7.8%	-3.7%	-0.8%

ALL REPORTING P-H-C-P AND P-V-F WHOLESALER/DISTRIBUTORS

SEVEN-YEAR SUMMARY PERFORMANCE COMPARISON 1981-1987

	1987	1986	1985	1984	1983	1982	1981
Financial Management							
Total Debt to Net Worth	104.6%	90.8%	88.0%	82.7%	78.4%	68.3%	74.1%
Current Assets Minus Inventory to Current Debt	1.0x	1.0x	1.1x	1.1x	1.1x	1.3x	1.1x
Personnel Productivity							
Net Sales per Employee	$200,712	$193,225	$187,024	$186,131	$167,380	$152,258	$162,040
Payroll and Fringe Benefits to Net Sales	13.0%	13.3%	13.5%	13.7%	14.1%	14.5%	14.1%
Inventory Management							
Gross Margin on Sales	25.1%	24.9%	24.9%	24.5%	24.8%	25.0%	24.7%
Cost of Warehouse Goods Sold to Average Inventory	3.6x	3.6x	3.4x	3.6x	3.3x	3.1x	3.4x
Total Cost of Goods Sold to Average Inventory	4.2x	4.2x	4.0x	4.1x	3.8x	3.6x	3.8x
Warehouse Gross Margin Return on Inventory	128%	122%	120%	123%	114%	109%	119%
Accounts Receivable							
Average Collection Period (Days)	48	47	47	48	50	47	44
Expense Management							
Total Operating Expenses as a Percent of Sales	22.7%	22.9%	21.9%	21.5%	22.4%	23.2%	21.7%
Sales Performance							
Percent Sales Change from Prior Year	11.0%	8.2%	8.3%	15.2%	10.5%	-4.3%	0.9%

nearly 50% of total asset investment, by far the largest asset category. Likewise, payroll costs alone account for over 57% of total operating expenses.

Some of the more noteworthy productivity trends in P-H-C-P wholesale/distribution over the past seven years (as indicated in accompanying tables) are as follows:

- Essentially, overall gross margin levels among all survey respondents in the aggregate have remained steady throughout the 1981-1987 period, at close to 25%. However, within the various product emphasis groups, other patterns have occurred.

  - Companies categorized as "Plumbing Supplies and Industrial P-V-F Firms" have experienced a somewhat up and down gross margin performance over the years. These went from 24.5% of sales in 1981, down to a low of 23.7% in 1984, up to a high of 25.9% in 1986 and back down to 24.8% in 1987.

  - "Industrial P-V-F Firms" have tended to experience an upward trend in gross margins as a percent of sales over the years. From a low of 23.4% in 1982, margins for these distributors have gradually increased to around 27% in recent years.

  - "Plumbing Supplies & Equipment Firms" experienced an increase in gross margin performance during 1987 (to 24.7% of sales) after several years of essentially steady performance.

  - "HVAC & Other Emphasis Firms" also experienced an increase in gross margins during 1987 (to 25.1% of sales from 24.5% in 1986) after a drop in 1986.

- Inventory turnover (as measured by cost of warehouse goods sold to average inventory) remained at 3.6 times for the third time in the last four years (based on all responding firms aggregated together).

- Personnel productivity, (as measured by payroll and fringe benefits as a percentage of net sales) has gradually improved over the years for P-H-C-P wholesalers in the aggregate, going from a high of 14.5% in 1982 steadily downward to 13.0% in 1987. This fact, coupled with steady overall gross margin performance has largely contributed to a gradual increase in bottom line profit performance (as a percentage of net sales).

  While the pattern of declining payroll and fringe benefits costs (as a percentage of net sales) has especially been true of "Plumbing Supplies & Equipment Firms" as well as "HVAC & Other Emphasis Firms." "Industrial P-V-F Firms" have not experienced the same level of success.

ACCOUNTS RECEIVABLE MANAGEMENT

Another important component of P-H-C-P wholesaler success is the extent to which the company's customers make timely payment on invoices. If invoices are not collected promptly, several unfavorable circumstances typically occur:

1. Cash flow becomes tight (due to all the excess dollars tied up in receivables) and paying current bills on time may become difficult.

2. Profitability leaks occur since excess receivables have corresponding costs, such as administrative costs, financing costs, and possibly outside agency costs (i.e., lawyers, credit bureaus, collection agencies, etc.). In addition, if receivables problems persist, bad debt expenses may become more and more significant.

3. Money tied up in excess receivables can prohibit your firm from taking advantage of growth opportunities and could jeopardize your ability to compete effectively.

The **Operating Performance Report** each year provides several indicators of receivables management that can be used as a gauge for monitoring your own firm's credit and collections situation. One such measure is the ratio called "average collection period" (or "days outstanding in receivables," as it is sometimes called). Based on the accompanying trend information, this measure has shown the following pattern in recent years for the four industry product emphasis groups:

- "Plumbing Supplies & Equipment Firms," which have consistently reported an average collection period of around 50 days.

- "Industrial P-V-F Firms" have reported average collection periods ranging from 40 to 51 days over the past seven years, with the average being just under 45.

- The product emphasis group categorized as "Plumbing Supplies & Equipment and Industrial P-V-F Firms" has experienced an average collection period that has consistently stayed in the 46-49 day range in all years except 1985 and 1986, when it rose to over 50 days.

- "HVAC and Other Emphasis Firms" during 1987 reported the lowest average collection period (45 days) of the four product emphasis groups.

Another tool for monitoring your firm's receivables management situation is through the accounts receivable aging information that is provided annually in the **Operating Performance Report** and which is summarized on the next page. In particular, this data shows the percentage of total receivables that are:

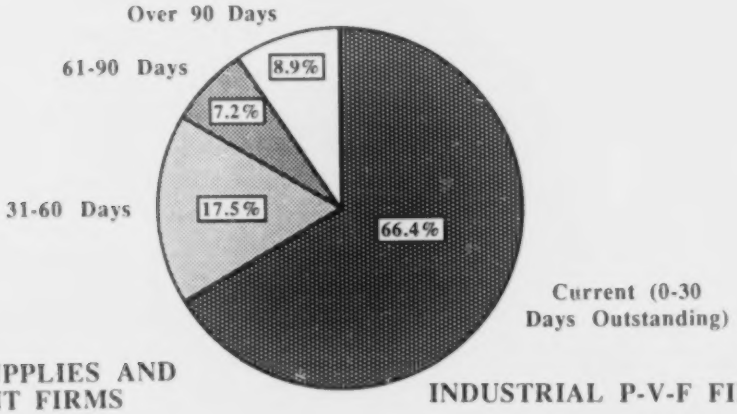
- Current (0-30 days since the original date of invoice)
- 31-60 days since the original date of invoice
- 61-90 days since the original date of invoice
- Over 90 days since the original date of invoice

As shown in the charts provided, at year-end 1987, the typical P-H-C-P wholesaler had 66.4% of receivables that were current (0-30 days since the original invoice date); 17.5% that were 31-60 days since the original invoice date; 7.2% that were 61-90 days since the original invoice date; and 8.9% outstanding over 90 days since being invoiced. This same general pattern was true for each of the four product emphasis groups shown. However, the "Plumbing Supplies & Equipment Firms" responding to the ASA survey tended to have a higher percentage of receivables outstanding over 60 days (18.1%) than any of the other categories.

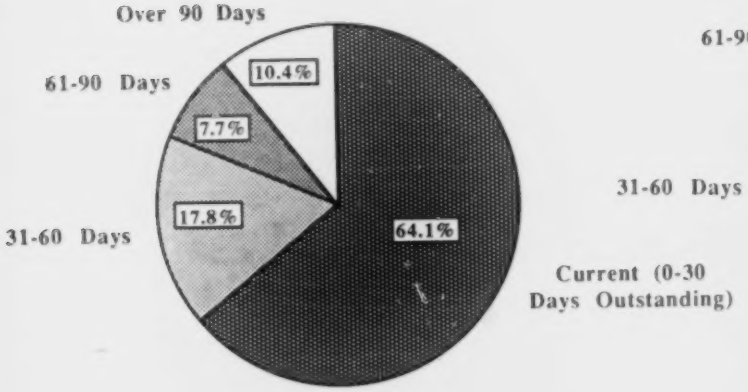
ACCOUNTS RECEIVABLE AGING -- 1987

(Percent of Accounts Receivable Dollars Current & Past Due)

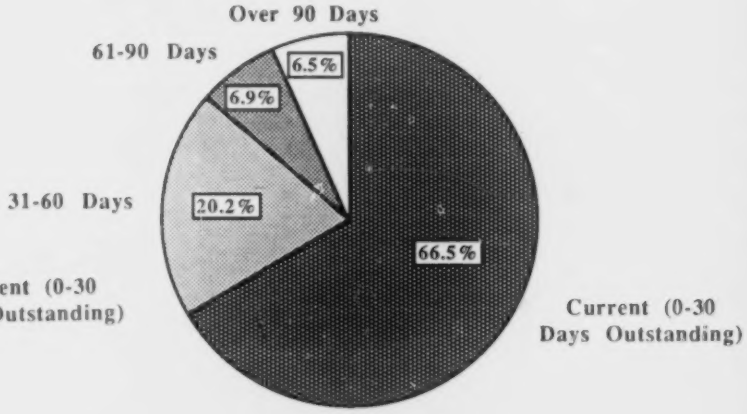
ALL REPORTING FIRMS



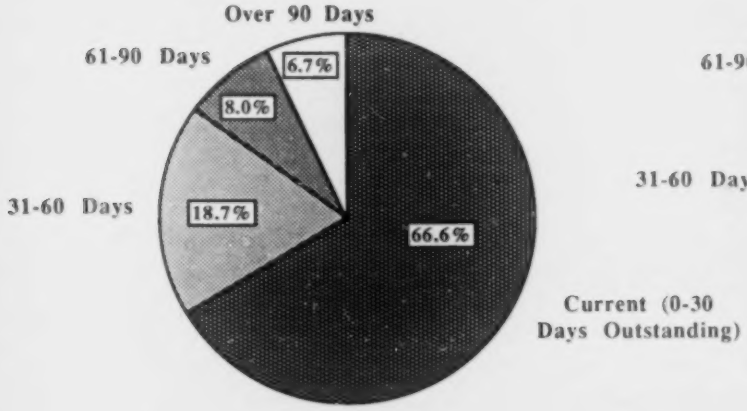
PLUMBING SUPPLIES AND EQUIPMENT FIRMS



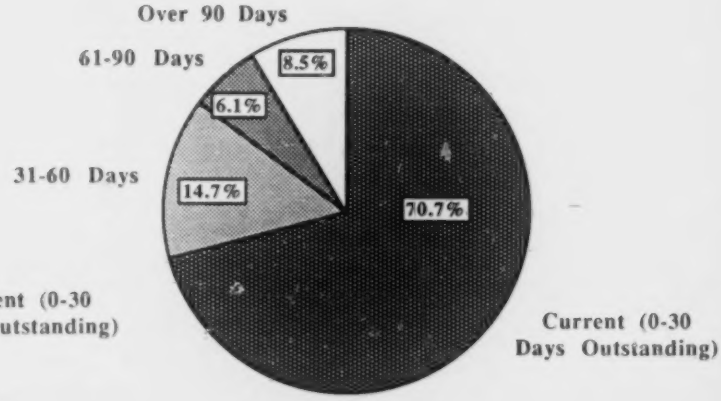
INDUSTRIAL P-V-F FIRMS



PLUMBING SUPPLIES & EQUIPMENT AND INDUSTRIAL P-V-F FIRMS



HVAC & OTHER EMPHASIS FIRMS



FINANCIAL MANAGEMENT

While the **Operating Performance Report** is filled with many measures of financial performance, only certain ratios are specifically related to "financial health." These are labeled as "financial management" measures in the accompanying tables and essentially these serve as the "vital signs" of a firm's financial strength. Included among these are measures of leverage (i.e., the degree to which a firm relies on debt to finance a portion of the business) and liquidity (i.e., a firm's ability to meet its current debt obligations--that is, pay its bills).

Your firm's "financial management" situation is especially important when you are faced with the need to finance the business, such as for money in the form of a line of credit, money for business expansion or capital expenditures, or some other purpose. When this occurs, generally the first aspect of your business that a lender will scrutinize is your financial management ratios. The more financial strength you can show, the greater likelihood you will be able to obtain the financing required and at favorable rates.

Among the four product emphasis groupings of firms participating in this year's ASA survey, the following observations are most noteworthy regarding financial management strength:

- "Total debt to net worth" which is an indication of "leverage" has gradually increased over the past seven years. This indicates that P-H-C-P wholesalers in the aggregate have tended to rely more and more on debt (rather than equity) financing. This pattern has been true in all four product emphasis categories.

- During 1987 "Plumbing Supplies & Equipment Firms" were the most highly leveraged group. Total debt represented 109.8% of net worth for the typical company among these firms. Meanwhile, the least leveraged group was "Plumbing Supplies and Industrial P-V-F Firms," with only a 75.7% ratio.

- Liquidity (as measured by current assets minus inventory to current debt, sometimes called the "quick ratio") has remained fairly constant for the typical industry firm over the years and 1987 was no exception.

EXPENSE AND PROFIT TRENDS (MARGIN MANAGEMENT)

Most wholesalers tend to be margin managers, spending much of their time controlling and managing operating expenses. Since most companies receive regular income statement (i.e., P&L) performance results from their accountant, bookkeeper, or computer system, watching expenses and bottom line profits is oftentimes foremost in their minds. This does not mean that wholesalers are not also concerned about inventory turnover and receivables management, but the immediate impact of expense management on profits tends to receive the most attention on a regular basis.

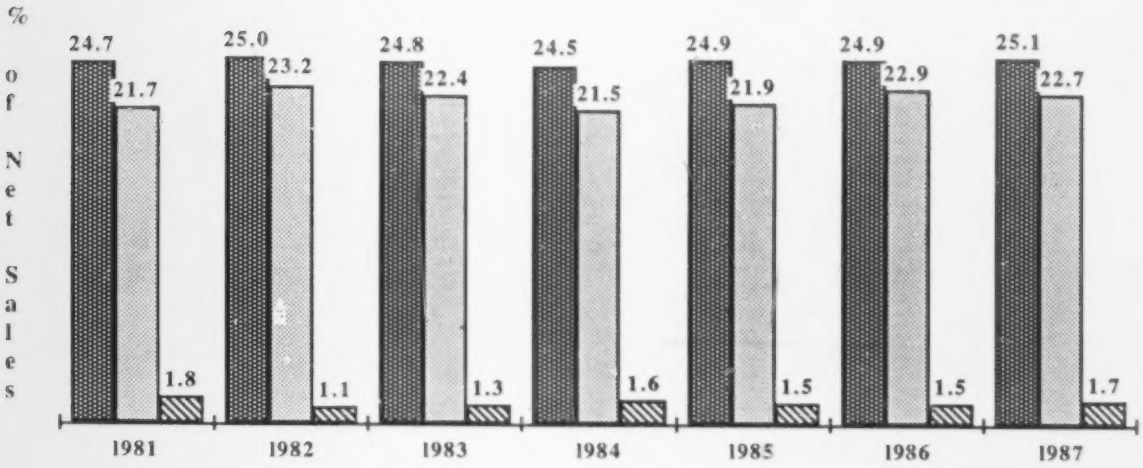
The charts on the next several pages highlight P-H-C-P wholesaler expense and margin trends (as a percentage of sales) over the 1981-1987 period. In general:

- Bottom line profit margins increased during 1987 for all P-H-C-P wholesalers in the aggregate to 1.7% of sales (as compared to 1.5% during each of the two previous years). Leading the way were "HVAC & Other Emphasis Firms,"

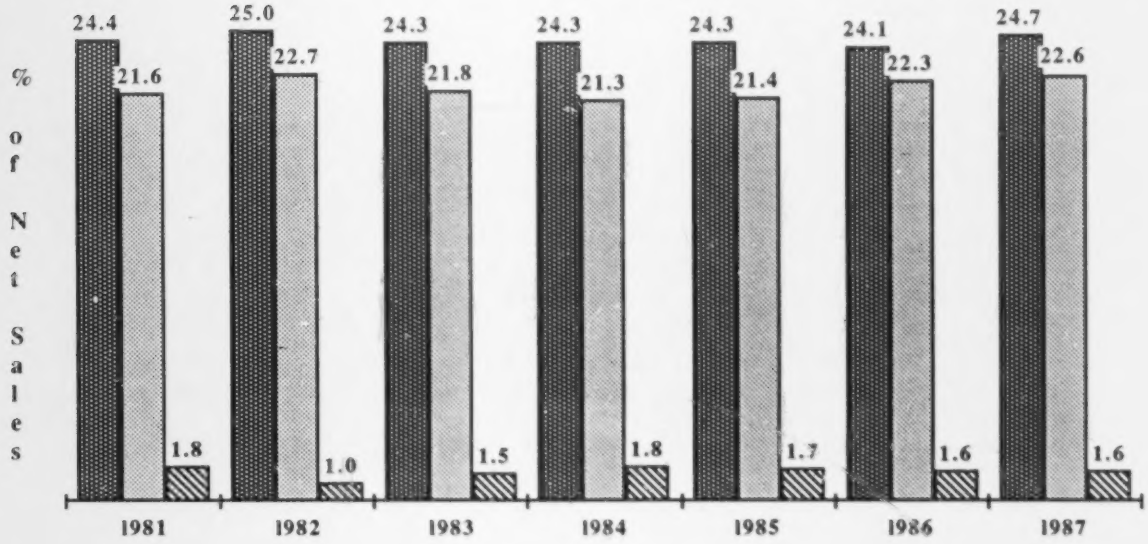
SEVEN-YEAR EXPENSE & PROFIT TRENDS
(1981 - 1987)

■ Gross Margin □ Operating Expenses ▨ Net Profit After Tax

ALL REPORTING P-H-C-P AND P-V-F WHOLESALER/DISTRIBUTORS



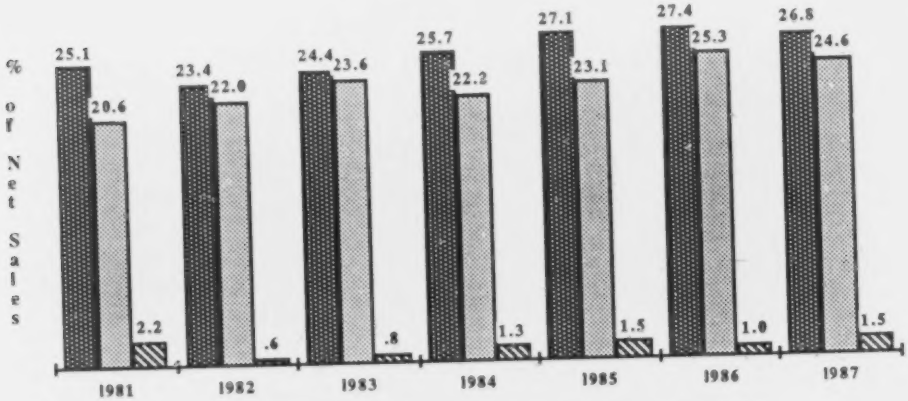
PLUMBING SUPPLIES & EQUIPMENT FIRMS



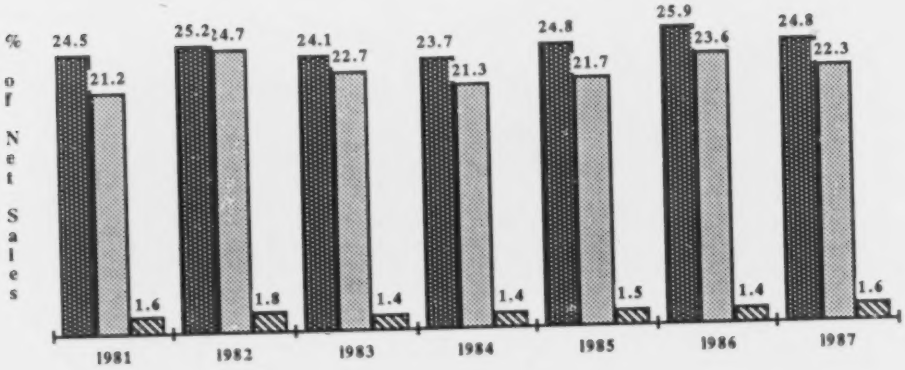
SEVEN-YEAR EXPENSE & PROFIT TRENDS
(1981 - 1987)

■ Gross Margin ▒ Operating Expenses ▨ Net Profit After Tax

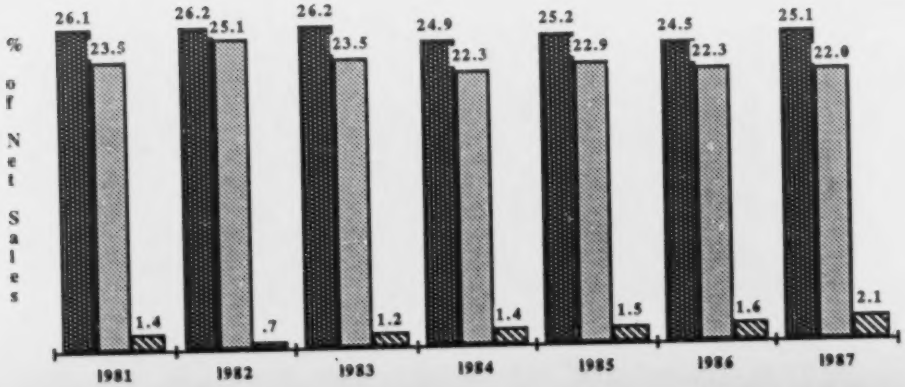
INDUSTRIAL P-V-F FIRMS



PLUMBING SUPPLIES & EQUIPMENT AND INDUSTRIAL P-V-F FIRMS



HVAC & OTHER EMPHASIS FIRMS



which posted a 2.1% profit margin percentage relative to sales, up from 1.6% the prior year. "Industrial P-V-F Firms" also experienced a strong profit margin increase during 1987, rising to 1.5% of sales versus only 1.0% in 1986.

- The primary reason for the industry-wide profit increase in 1987 was due to a small improvement in gross margin levels (from 24.9% of sales in 1986 to 25.1% in 1987) coupled with a small reduction in expenses (from 22.9% of sales in 1986 to 22.7% in 1987). Exceptions to this pattern were "Industrial P-V-F Firms" and the group categorized as "Plumbing Supplies and Industrial P-V-F Firms." Both of these product emphasis groups experienced declines in gross margin levels (as a percent of sales), but such declines were offset by even greater reductions in expenses (as a percent of sales).

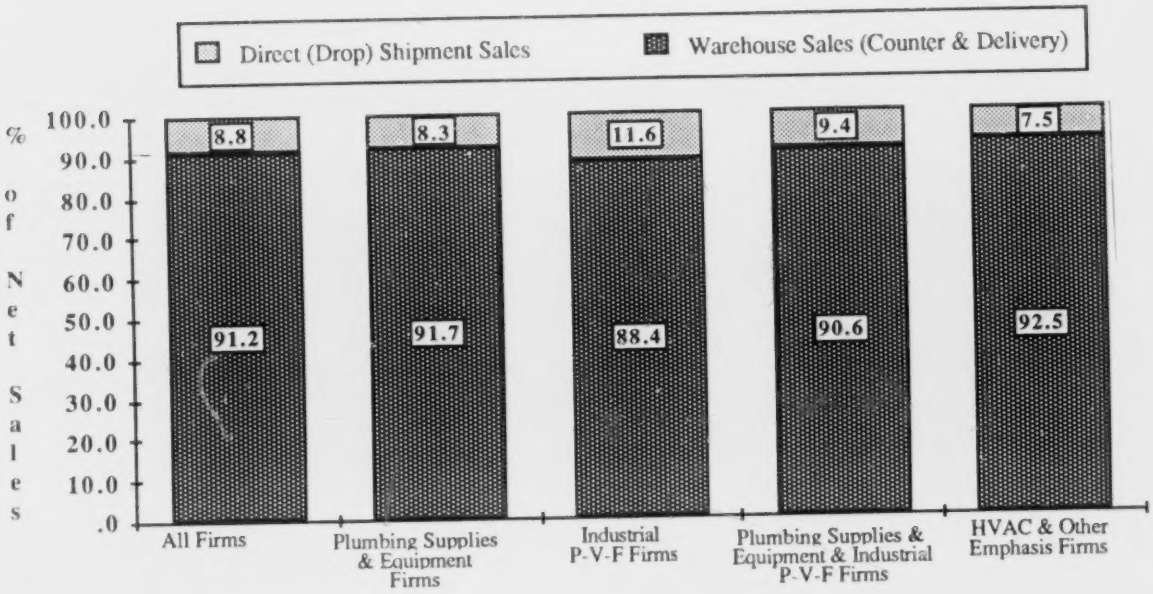
SALES PERFORMANCE

The accompanying "sales performance" graphs highlight the pattern of sales increases for each group of P-H-C-P wholesalers over the past seven years. As was discussed previously, the industry as a whole (when measured by all firms in the aggregate) experienced an 11.0% sales gain in 1987 over 1986 levels. Leading the way was the "Plumbing Supplies and Industrial P-V-F Firms" group. These firms posted a 13.8% 1987 sales advance over 1986. The smallest gain was by the "Plumbing Supplies & Equipment Firms" group, which reported a 9.3% gain which is still quite respectable considering inflation in the overall economy was less than 5%.

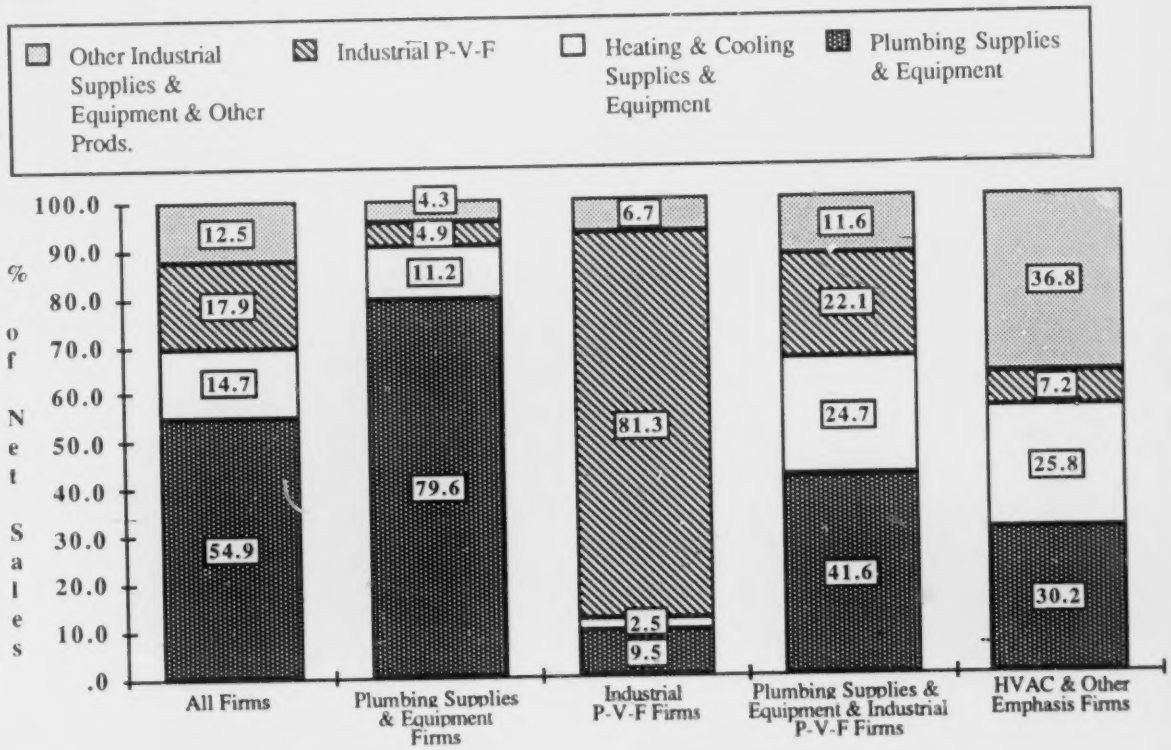
For your reference, additional insights into the make-up of P-H-C-P wholesalers sales by type of operator are shown in the accompanying "sales mix" and "product mix" tables. These charts indicate the mix of direct or drop shipment sales versus warehouse (counter and delivery) sales, as well as the mix of sales by broad product category.

ANALYSIS OF 1987 P-H-C-P WHOLESALER SALES

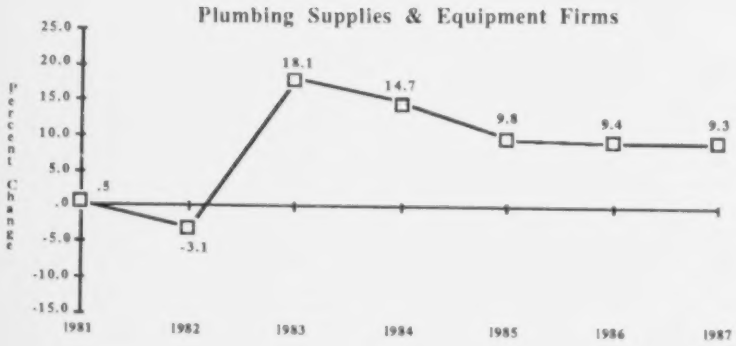
SALES MIX

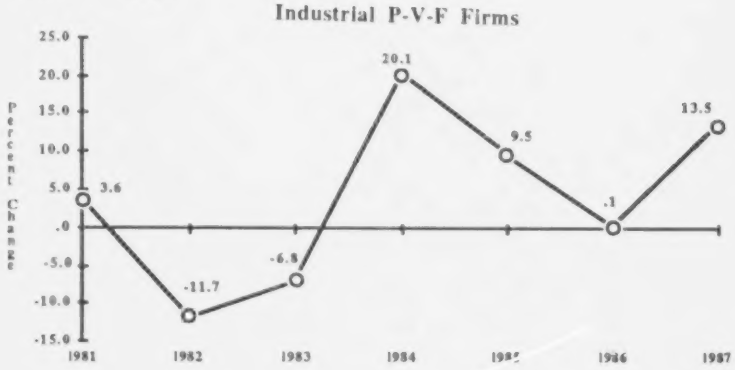


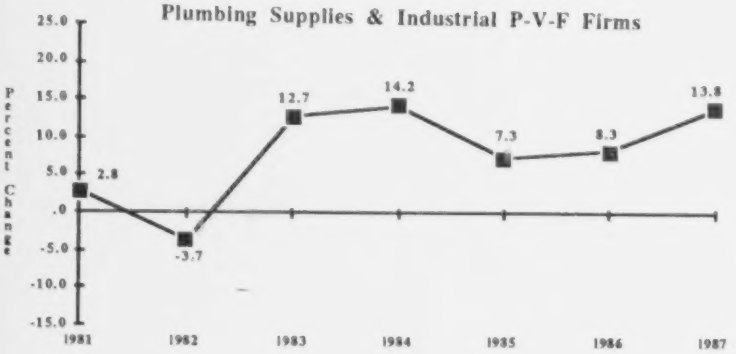
PRODUCT MIX

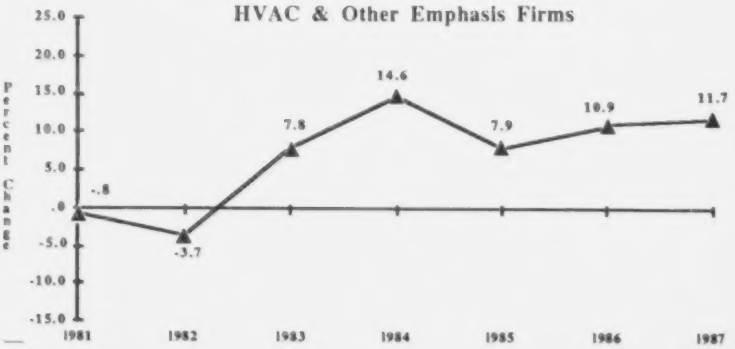


SALES PERFORMANCE
Percent Sales Change from Prior Year
1981-1987









PROFITABILITY COMPARISON--1987 VS 1986

The best overall indicator of financial performance for virtually any firm, is "return on net worth." This single measure essentially summarizes all the key components of profitability: margin management, asset management and financial policy management.

The exhibit on the following page shows the overall return on net worth of P-H-C-P wholesalers in both 1987 and 1986 as well as the combined impact of each of the three "pathways" to high profitability. These include:

- **Profit Margin** refers to net profit (after tax) divided by net sales. It is a good measure of margin management because in order to achieve an acceptable net profit margin, a company must earn an acceptable gross margin while keeping expenses in line.

- **Asset Turnover** depicts net sales divided by total assets. This is an overall measure of asset management, showing how many dollars in sales are being generated by each dollar of assets employed in running the business.

- **Financial Leverage** is derived from total assets divided by net worth. Financial leverage is nothing more than the degree to which debt is used to finance the business as opposed to net worth (owner's investment).

Since the above three components multiply together to yield return on net worth, *increases in any of these three improves the overall profitability of the firm.*

Based upon the profit models shown in the accompanying exhibit for the various types of P-H-C-P wholesalers, several overall insights are noteworthy:

- Overall profitability during 1987 (as measured by return on net worth) increased for each of the four product emphasis groups as compared to that which was achieved in 1986. "HVAC & Other Emphasis Firms" were the most profitable, with a 10.3% return, while the least profitable group was "Plumbing Supplies and Industrial P-V-F Firms," which posted a respectable 8.9% return.

- While the "Plumbing Supplies and Industrial P-V-F Firms" group was the least profitable, these firms experienced the greatest profitability improvement over the 1986 to 1987 period, going from a return on net worth of 6.4% in 1986 to 8.9% in 1987.

P-H-C-P WHOLESALER TWO YEAR STRATEGIC PROFIT MODEL RATIOS

(1987 VS 1986)

How to Interpret

Profit Margin 1987/1986 x Asset Turns 1987/1986 → Return on Assets 1987/1986 x Financial Leverage 1987/1986 = Return on Net Worth 1987/1986

Note: Mathematical relationships may not total due to rounding.

Plumbing Supplies & Equipment Firms

Profit Margin 1987	Profit Margin 1986	Asset Turns 1987	Asset Turns 1986	Return on Assets 1987	Return on Assets 1986	Financial Leverage 1987	Financial Leverage 1986	Return on Net Worth 1987	Return on Net Worth 1986
1.6%	1.6%	2.6x	2.7x	4.3%	4.2%	2.1x	2.1x	10.2%	8.2%

Industrial P-V-F Firms

Profit Margin 1987	Profit Margin 1986	Asset Turns 1987	Asset Turns 1986	Return on Assets 1987	Return on Assets 1986	Financial Leverage 1987	Financial Leverage 1986	Return on Net Worth 1987	Return on Net Worth 1986
1.5%	1.0%	2.7x	2.7x	4.6%	2.8%	2.1x	1.8x	9.8%	7.1%

Plumbing Supplies & Equipment and Industrial P-V-F- Firms

Profit Margin 1987	Profit Margin 1986	Asset Turns 1987	Asset Turns 1986	Return on Assets 1987	Return on Assets 1986	Financial Leverage 1987	Financial Leverage 1986	Return on Net Worth 1987	Return on Net Worth 1986
1.6%	1.4%	2.7x	2.6x	4.7%	4.1%	1.8x	1.8x	8.9%	6.4%

HVAC & Other Emphasis Firms

Profit Margin 1987	Profit Margin 1986	Asset Turns 1987	Asset Turns 1986	Return on Assets 1987	Return on Assets 1986	Financial Leverage 1987	Financial Leverage 1986	Return on Net Worth 1987	Return on Net Worth 1986
2.1%	1.6%	2.4x	2.6x	4.7%	4.2%	2.1x	1.9x	10.3%	8.7%

ALL REPORTING FIRMS

Profit Margin 1987	Profit Margin 1986	Asset Turns 1987	Asset Turns 1986	Return on Assets 1987	Return on Assets 1986	Financial Leverage 1987	Financial Leverage 1986	Return on Net Worth 1987	Return on Net Worth 1986
1.7%	1.5%	2.6x	2.6x	4.5%	4.0%	2.0x	1.9x	9.8%	8.1%

CHARACTERISTICS OF "WINNING PERFORMANCE"

One of the primary purposes of each year's Operating Performance Report is to help P-H-C-P wholesale/distributors improve their performance. A useful tool for doing this is to study the performance characteristics of the most successful firms in the industry (i.e., the "winning firms"), and then strive to emulate such performance.

Perhaps, therefore, the most important set of statistics contained in each year's Operating Performance Report is the "High Profit Firm" results. Essentially, this is a special data grouping of the most profitable companies in each product emphasis group (on the basis of before tax return on assets).

It should be understood that not all highly profitable companies will exhibit the characteristics indicated by the accompanying "high profit" firm data. However, it is an excellent idea to focus attention on the characteristics of these profit leaders in order to help identify which business activities might yield the biggest profitability boost to your own firm.

The accompanying table showing a "High Profit vs. Typical Firm Performance Comparison" is a summary of the key indicators of profitability, showing the results of the "High Profit Firms" as compared to the typical or median company performance. While there are certainly many differences on a company by company basis in what highly profitable companies do to be profitable, some generalizations are possible from the aggregate results provided in this study. In particular:

- In each of the four product emphasis groups, the High Profit Firms experienced higher sales increases than the typical industry firm.
- Total operating expenses as a percentage of sales in 1987 were consistently lower for the high profit firms. The largest differentiating category was general & administrative expenses.
- While gross margin as a percentage of sales was not necessarily any better for the high profit firms (as compared to the typical industry firm), "inventory turnover" and "warehouse gross margin return on average inventory" (GMROI) were consistently better for the industry "winners."
- The high profit companies in each of the four product emphasis group were significantly less highly leveraged (as measured by "total debt to net worth") than other industry firms.

1987 High Profit vs. "Typical Firm" Performance Comparison

	Plumbing Supplies & Equipment ----Firms----		Industrial P-V-F ----Firms----		Plumbing Supplies & Equipment & Industrial ---P-V-F Firms---		HVAC & Other Emphasis -----Firms----		
	Typical	High Profit	Typical	High Profit	Typical	High Profit	Typical	High Profit	All Firms
Profitability									
Net Profit (After Tax) to Total Assets	4.3%	8.3%	4.6%	7.7%	4.7%	7.3%	4.7%	8.7%	4.5%
Net Profit (After Tax) to Net Worth	10.2	17.4	9.8	17.0	8.9	11.4	10.3	15.7	9.8
Net Profit (After Tax) to Net Sales	1.6	3.3	1.5	2.8	1.6	2.7	2.1	3.8	1.7
Asset and Financial Management									
Net Sales to Total Assets	2.6x	2.7x	2.7x	2.9x	2.7x	2.6x	2.4x	2.3x	2.6x
Total Debt to Net Worth	109.8%	89.8%	104.6%	89.9%	75.7%	54.1%	106.5%	65.1%	104.6%
Current Assets to Current Debt	2.3x	2.4x	2.2x	2.1x	2.6x	2.7x	2.6x	2.6x	2.3x
Personnel Productivity									
Net Sales/Employee (000)	$203.3	$204.9	$210.0	$247.5	$202.2	$201.8	$184.9	$212.8	$200.7
Payroll & Fringe Benfits to Net Sales	12.6%	12.6	14.7%	13.4%	14.4%	15.2%	12.5%	10.3%	13.0%
Inventory Management									
Gross Margin on Net Sales	24.7%	25.7%	26.8%	25.9%	24.8%	26.3%	25.1%	25.0%	25.1%
Gross Margin on Direct Shipments	11.3%	10.1%	11.6%	10.4%	12.0%	12.9%	13.0%	13.7%	12.0%
Gross Margin on Warehouse Sales	24.8%	26.3%	27.7%	29.4%	25.6%	28.6%	24.7%	24.9%	25.6%
Cost of Warehouse Goods Sold to Average Inventory	3.6x	3.9x	3.5x	4.4x	3.9x	3.9x	3.4x	3.5x	3.6x
% Warehouse Sales from Non-Stock Items	9.0%	7.0%	24.0%	31.9%	12.5%	10.0%	9.0%	5.0%	10.0%
Cost of In-Stock Warehouse Sales to Average Inventory	3.3x	3.5x	3.1x	3.4x	3.2x	3.4x	3.1x	3.6x	3.2x
Total Cost of Goods Sold to Average Inventory	4.1x	4.7x	4.6x	4.6x	4.2x	4.4x	3.8x	4.0x	4.2x
Warehouse Gross Margin Return on Average Inventory	129%	141%	143%	164%	125%	143%	110%	123%	128%
Accounts Receivable									
Average Collection Period (Days)	51	47	48	44	48	48	46	47	48
Operating Expenses (% of Net Sales)									
Selling Expenses	5.8%	5.8%	7.8%	7.3%	6.9%	6.7%	6.5%	6.3%	6.4%
Delivery Expenses	2.0%	1.9%	2.2%	1.8%	1.9%	1.9%	1.6%	1.2%	1.9%
Warehouse Expenses	2.7%	2.8%	3.5%	3.2%	2.6%	3.1%	3.0%	2.7%	2.9%
General & Admin. Expenses	9.3%	8.4%	8.7%	7.2%	8.9%	8.9%	8.5%	7.5%	9.0%
Occupancy Expenses	2.3%	2.2%	1.8%	1.1%	1.6%	1.5%	2.0%	2.2%	2.1%
Total Operating Expenses	22.6%	21.4%	24.6%	20.9%	22.3%	22.4%	22.0%	20.3%	22.7%
Sales Performance									
Percent Sales Change from Prior Year	9.3%	12.2%	13.5%	16.3%	13.8%	17.4%	11.1%	15.0%	11.0%

PLUMBING SUPPLIES & EQUIPMENT FIRMS

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	10.2%	4.7 - 18.3%
Total Assets to Net Worth	2.1X	1.6 - 3.3X
Net Profit After Tax to Total Assets	4.3%	2.0 - 8.3%
Net Sales to Total Assets	2.6X	2.2 - 3.0X
Net Profit After Tax to Net Sales	1.6%	0.7 - 3.3%
Net Profit Before Tax to Net Worth	14.0%	6.2 - 24.9%
Net Profit Before Tax to Total Assets	5.9%	2.8 - 11.7%
EBIT to Total Assets	8.6%	5.7 - 13.5%
SALES ANALYSIS		
Net Sales($000)	$6,281	$3,050 - 12,379
Percent Sales Change from Prior Year	9.3%	1.2 - 18.5%
Sales Mix:		
Direct Sales	8.3%	2.4 - 11.5%
Warehouse Sales - Counter and Delivery	91.7%	88.5 - 97.6%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	79.6%	65.0 - 95.0%
Heating & Cooling Supplies & Equipment	11.2%	0.0 - 20.8%
Industrial P-V-F (Pipes-Valves-Fittings)	4.9%	0.0 - 7.0%
Other Industrial Supplies & Equipment	1.5%	0.0 - 1.0%
Other Products	2.8%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.7%	21.7 - 27.0%
Gross Margin on Direct Shipments	11.3%	8.8 - 15.1%
Gross Margin on Warehouse Sales	24.8%	22.9 - 27.7%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.90X	2.55 - 3.40X
Total Debt to Net Worth	109.8%	56.1 - 229.9%
Current Debt to Net Worth	86.1%	44.8 - 157.5%
Current Assets to Current Debt	2.25X	1.64 - 3.13X
Current Assets Minus Inventory/Curr Debt	0.98X	0.72 - 1.41X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	5.0 - 8.0
Average Invoice Size	$156	$103 - 231
Average Billing Line	$27.65	$15.06 - 40.72

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$203,256	$175,923 - 246,243
Gross Margin Per Employee	$47,823	$43,453 - 57,705
Average Compensation Per Employee	$24,176	$20,792 - 27,893
Average Fringe Benefits Per Employee	$4,045	$3,055 - 5,413
Compensation & Fringes Per Employee	$27,974	$23,699 - 33,173
Payroll to Net Sales	11.6%	10.2 - 13.4%
Fringe Benefits to Net Sales	2.0%	1.6 - 2.5%
Payroll & Fringes to Net Sales	12.6%	0.0 - 14.7%
Payroll to Gross Margin	48.8%	43.8 - 52.9%
Fringe Benefits to Gross Margin	8.4%	6.6 - 10.4%
Payroll & Fringes to Gross Margin	52.9%	0.0 - 59.6%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.62X	3.18 - 4.86X
% of Whse Sales from Non-Stock Items	9.0%	5.0 - 15.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.25X	2.77 - 4.34X
No. of Days Average Inventory Carried	101 Days	75 - 115 Days
Total Cost of Goods Sold to Ave Inventory	4.10X	3.37 - 5.47X
Whse Gross Margin Return on Ave Inventory	129%	104 - 152%
Turn & Earn Profitability Index	94%	77 - 114%
Percent of Firms on LIFO	48.8%	
ACCOUNTS RECEIVABLE		
Average Collection Period	51 Days	43 - 59 Days
Gross Margin Return on Receivables	168%	141 - 206%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	64.2%	55.5 - 72.2%
31-60 Days Outstanding	17.8%	13.0 - 22.3%
61-90 Days Outstanding	7.7%	4.8 - 9.6%
Over 90 Days Outstanding	10.4%	5.1 - 15.1%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,412	$836 - 2,088
31-60 Days Outstanding	$1,512	$968 - 2,483
61-90 Days Outstanding	$1,502	$843 - 3,186
Over 90 Days Outstanding	$1,957	$1,016 - 3,959
Total	$1,523	$1,027 - 2,317
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	69.7%	59.6 - 80.8%
31-60 Days Outstanding	16.3%	11.5 - 21.2%
61-90 Days Outstanding	6.6%	3.5 - 9.0%
Over 90 Days Outstanding	7.4%	3.1 - 10.7%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.3%	73.0 - 78.3%
Gross Margin	24.7%	21.7 - 27.0%
Operating Expenses:		
Selling Expenses	5.8%	4.3 - 7.2%
Delivery Expenses	2.0%	1.3 - 2.6%
Warehouse Expenses	2.7%	1.6 - 3.3%
General & Administrative Expenses	9.3%	6.9 - 11.0%
Occupancy Expenses	2.3%	1.5 - 2.9%
Other Operating Expenses	0.4%	0.0 - 0.2%
Total Operating Expenses	22.6%	19.4 - 24.8%
Net Operating Profit	2.2%	0.7 - 3.6%
Non-Operating Income	1.9%	1.1 - 2.6%
Non-Operating Expenses	1.9%	0.9 - 2.7%
Net Profit Before Tax	2.2%	1.0 - 4.0%
Net Profit After Tax	1.6%	0.7 - 3.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.6%	19.4 - 24.8%
Total Operating Expense to Gross Margin	91.7%	84.9 - 97.3%
Non-People Expense to Net Sales	8.1%	6.4 - 9.0%
Non-People Expense to Gross Margin	33.4%	27.6 - 37.4%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.8%	0.4 - 1.4%
Times Interest Earned	3.7X	2.0 - 7.6X
BALANCE SHEET		
Cash	4.8%	0.5 - 5.3%
Accounts & Notes Receivable, Trade(Net)	32.8%	26.4 - 38.6%
Inventory	48.4%	41.4 - 56.4%
Other Current Assets	1.6%	0.2 - 1.8%
Total Current Assets	87.6%	83.4 - 93.8%
All Other Assets	12.4%	6.2 - 16.6%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	41.5%	27.8 - 54.4%
Total Long-Term Liabilities	12.4%	1.0 - 18.7%
Total Liabilities	53.9%	37.2 - 70.3%
Total Net Worth	46.1%	29.7 - 62.8%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	8.7%	2.1 - 17.4%
Total Assets to Net Worth	2.2X	1.4 - 3.6X
Net Profit After Tax to Total Assets	4.1%	0.6 - 6.9%
Net Sales to Total Assets	2.3X	2.0 - 2.6X
Net Profit After Tax to Net Sales	1.7%	0.3 - 3.3%
Net Profit Before Tax to Net Worth	11.4%	3.2 - 21.0%
Net Profit Before Tax to Total Assets	5.0%	0.7 - 9.2%
EBIT to Total Assets	9.2%	4.7 - 12.9%
SALES ANALYSIS		
Net Sales($000)	$1,840	$1,384 - 2,260
Percent Sales Change from Prior Year	5.2%	-2.3 - 14.2%
Sales Mix:		
Direct Sales	4.8%	1.1 - 7.1%
Warehouse Sales - Counter and Delivery	95.2%	92.9 - 98.9%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	84.8%	75.0 - 95.0%
Heating & Cooling Supplies & Equipment	6.9%	0.0 - 10.0%
Industrial P-V-F (Pipes-Valves-Fittings)	3.9%	0.0 - 5.0%
Other Industrial Supplies & Equipment	1.5%	0.0 - 1.0%
Other Products	2.9%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	27.1%	23.6 - 29.1%
Gross Margin on Direct Shipments	11.8%	9.3 - 13.6%
Gross Margin on Warehouse Sales	26.3%	23.4 - 29.1%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.62X	2.12 - 3.10X
Total Debt to Net Worth	109.9%	42.5 - 257.8%
Current Debt to Net Worth	67.9%	29.6 - 152.8%
Current Assets to Current Debt	2.50X	1.83 - 4.77X
Current Assets Minus Inventory/Curr Debt	0.98X	0.72 - 1.77X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	7.0	5.5 - 8.0
Average Invoice Size	$99	$80 - 123
Average Billing Line	$14.89	$10.56 - 18.22

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$175,127	$138,399 - 181,037
Gross Margin Per Employee	$43,503	$38,562 - 48,235
Average Compensation Per Employee	$20,372	$17,665 - 23,083
Average Fringe Benefits Per Employee	$3,048	$2,269 - 4,355
Compensation & Fringes Per Employee	$23,058	$19,400 - 26,173
Payroll to Net Sales	12.3%	11.2 - 14.8%
Fringe Benefits to Net Sales	2.0%	1.5 - 2.6%
Payroll & Fringes to Net Sales	12.7%	0.0 - 16.1%
Payroll to Gross Margin	46.9%	44.3 - 51.9%
Fringe Benefits to Gross Margin	7.0%	5.5 - 10.0%
Payroll & Fringes to Gross Margin	49.7%	0.0 - 58.0%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.32X	2.67 - 3.97X
% of Whse Sales from Non-Stock Items	8.0%	2.0 - 17.1%
Cost of In-Stock Whse Sales/Ave Inventory	2.93X	2.30 - 3.12X
No. of Days Average Inventory Carried	110 Days	92 - 137 Days
Total Cost of Goods Sold to Ave Inventory	3.16X	2.72 - 3.86X
Whse Gross Margin Return on Ave Inventory	119%	102 - 142%
Turn & Earn Profitability Index	89%	68 - 100%
Percent of Firms on LIFO	26.9%	
ACCOUNTS RECEIVABLE		
Average Collection Period	46 Days	40 - 54 Days
Gross Margin Return on Receivables	195%	145 - 231%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	66.6%	61.5 - 73.9%
31-60 Days Outstanding	17.1%	12.5 - 21.4%
61-90 Days Outstanding	7.1%	3.6 - 8.1%
Over 90 Days Outstanding	9.2%	4.3 - 13.4%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$826	$515 - 1,240
31-60 Days Outstanding	$1,024	$712 - 1,376
61-90 Days Outstanding	$894	$571 - 1,526
Over 90 Days Outstanding	$1,833	$956 - 3,108
Total	$1,085	$551 - 1,318
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	73.7%	66.3 - 81.7%
31-60 Days Outstanding	15.1%	11.5 - 18.3%
61-90 Days Outstanding	5.8%	2.8 - 7.7%
Over 90 Days Outstanding	5.4%	2.8 - 7.8%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	72.9%	70.9 - 76.4%
Gross Margin	27.1%	23.6 - 29.1%
Operating Expenses:		
Selling Expenses	6.4%	4.1 - 8.0%
Delivery Expenses	2.4%	1.6 - 3.2%
Warehouse Expenses	2.7%	1.6 - 3.4%
General & Administrative Expenses	10.4%	7.7 - 12.7%
Occupancy Expenses	2.5%	1.3 - 3.4%
Other Operating Expenses	0.4%	0.0 - 0.1%
Total Operating Expenses	24.8%	20.5 - 28.8%
Net Operating Profit	2.3%	0.6 - 3.9%
Non-Operating Income	1.7%	0.8 - 2.3%
Non-Operating Expenses	2.1%	0.9 - 2.9%
Net Profit Before Tax	1.9%	0.4 - 4.0%
Net Profit After Tax	1.7%	0.3 - 3.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	24.8%	20.5 - 28.8%
Total Operating Expense to Gross Margin	91.6%	85.0 - 98.1%
Non-People Expense to Net Sales	9.1%	6.5 - 10.0%
Non-People Expense to Gross Margin	33.8%	26.6 - 41.8%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.3%	0.4 - 2.1%
Times Interest Earned	2.5X	1.2 - 6.4X
BALANCE SHEET		
Cash	6.4%	0.8 - 7.3%
Accounts & Notes Receivable, Trade(Net)	26.6%	20.2 - 33.4%
Inventory	52.9%	46.4 - 64.1%
Other Current Assets	1.9%	0.1 - 1.8%
Total Current Assets	87.8%	82.7 - 94.8%
All Other Assets	12.2%	5.3 - 17.3%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	36.9%	18.5 - 50.0%
Total Long-Term Liabilities	17.6%	0.2 - 28.4%
Total Liabilities	54.4%	30.2 - 73.0%
Total Net Worth	45.6%	27.1 - 69.8%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $3,000,000 TO $7,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	11.1%	6.0 - 15.6%
Total Assets to Net Worth	1.8X	1.5 - 2.7X
Net Profit After Tax to Total Assets	4.4%	2.7 - 8.8%
Net Sales to Total Assets	2.7X	2.3 - 3.0X
Net Profit After Tax to Net Sales	1.8%	1.0 - 3.3%
Net Profit Before Tax to Net Worth	13.1%	7.4 - 24.5%
Net Profit Before Tax to Total Assets	5.6%	3.2 - 12.0%
EBIT to Total Assets	8.1%	5.7 - 11.9%
SALES ANALYSIS		
Net Sales($000)	$4,474	$4,021 - 5,595
Percent Sales Change from Prior Year	7.0%	0.7 - 16.7%
Sales Mix:		
Direct Sales	7.7%	0.6 - 10.2%
Warehouse Sales - Counter and Delivery	92.3%	89.8 - 99.4%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	78.8%	61.5 - 95.0%
Heating & Cooling Supplies & Equipment	12.7%	0.0 - 25.5%
Industrial P-V-F (Pipes-Valves-Fittings)	5.1%	0.0 - 7.0%
Other Industrial Supplies & Equipment	1.3%	0.0 - 0.0%
Other Products	2.0%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.9%	22.3 - 26.9%
Gross Margin on Direct Shipments	12.2%	8.7 - 17.1%
Gross Margin on Warehouse Sales	25.2%	22.7 - 28.6%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.91X	2.57 - 3.41X
Total Debt to Net Worth	89.4%	51.5 - 174.2%
Current Debt to Net Worth	78.0%	46.5 - 142.5%
Current Assets to Current Debt	2.34X	1.65 - 3.01X
Current Assets Minus Inventory/Curr Debt	1.10X	0.79 - 1.47X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	7.0	5.0 - 10.0
Average Invoice Size	$168	$107 - 228
Average Billing Line	$26.61	$14.82 - 30.41

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $3,000,000 TO $7,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$205,167	$179,058 - 233,265
Gross Margin Per Employee	$49,203	$44,884 - 58,968
Average Compensation Per Employee	$25,238	$22,566 - 28,785
Average Fringe Benefits Per Employee	$4,157	$3,643 - 5,258
Compensation & Fringes Per Employee	$29,388	$25,630 - 33,618
Payroll to Net Sales	11.9%	10.8 - 14.2%
Fringe Benefits to Net Sales	2.1%	1.7 - 2.6%
Payroll & Fringes to Net Sales	13.2%	0.0 - 15.6%
Payroll to Gross Margin	50.3%	45.9 - 53.9%
Fringe Benefits to Gross Margin	8.4%	6.7 - 10.4%
Payroll & Fringes to Gross Margin	54.4%	0.0 - 61.5%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.96X	3.26 - 5.13X
% of Whse Sales from Non-Stock Items	9.4%	5.0 - 16.3%
Cost of In-Stock Whse Sales/Ave Inventory	3.45X	2.81 - 4.57X
No. of Days Average Inventory Carried	93 Days	71 - 112 Days
Total Cost of Goods Sold to Ave Inventory	4.29X	3.51 - 5.72X
Whse Gross Margin Return on Ave Inventory	139%	106 - 181%
Turn & Earn Profitability Index	104%	81 - 136%
Percent of Firms on LIFO	37.8%	
ACCOUNTS RECEIVABLE		
Average Collection Period	54 Days	46 - 61 Days
Gross Margin Return on Receivables	166%	143 - 200%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	61.8%	53.0 - 72.1%
31-60 Days Outstanding	18.7%	12.9 - 24.2%
61-90 Days Outstanding	8.4%	4.6 - 11.1%
Over 90 Days Outstanding	11.1%	4.9 - 15.0%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,392	$860 - 1,984
31-60 Days Outstanding	$1,460	$969 - 2,711
61-90 Days Outstanding	$1,179	$875 - 2,773
Over 90 Days Outstanding	$1,732	$710 - 3,756
Total	$1,566	$991 - 2,185
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	66.5%	56.1 - 77.1%
31-60 Days Outstanding	17.7%	12.1 - 22.2%
61-90 Days Outstanding	7.8%	4.8 - 9.5%
Over 90 Days Outstanding	8.0%	3.7 - 12.0%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $3,000,000 TO $7,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.1%	73.2 - 77.7%
Gross Margin	24.9%	22.3 - 26.9%
Operating Expenses:		
Selling Expenses	6.2%	4.5 - 8.0%
Delivery Expenses	1.9%	1.0 - 2.7%
Warehouse Expenses	2.7%	2.1 - 3.3%
General & Administrative Expenses	9.3%	6.0 - 10.7%
Occupancy Expenses	2.0%	1.4 - 2.8%
Other Operating Expenses	0.5%	0.0 - 0.5%
Total Operating Expenses	22.7%	19.7 - 25.2%
Net Operating Profit	2.2%	1.0 - 4.4%
Non-Operating Income	2.0%	1.5 - 2.6%
Non-Operating Expenses	1.9%	1.0 - 2.7%
Net Profit Before Tax	2.4%	1.1 - 4.3%
Net Profit After Tax	1.8%	1.0 - 3.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.7%	19.7 - 25.2%
Total Operating Expense to Gross Margin	91.3%	84.6 - 95.8%
Non-People Expense to Net Sales	7.7%	6.3 - 8.8%
Non-People Expense to Gross Margin	31.6%	26.6 - 35.5%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.6%	0.4 - 1.1%
Times Interest Earned	5.6X	2.4 - 7.3X
BALANCE SHEET		
Cash	6.1%	0.6 - 8.6%
Accounts & Notes Receivable, Trade(Net)	35.0%	26.5 - 42.1%
Inventory	47.0%	36.7 - 55.8%
Other Current Assets	1.3%	0.1 - 1.7%
Total Current Assets	89.4%	87.3 - 94.6%
All Other Assets	10.6%	5.4 - 12.7%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	40.7%	29.7 - 51.2%
Total Long-Term Liabilities	8.6%	0.3 - 13.5%
Total Liabilities	49.3%	32.3 - 64.6%
Total Net Worth	50.7%	35.4 - 67.7%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $7,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	10.6%	6.6 - 18.0%
Total Assets to Net Worth	2.1X	1.7 - 2.7X
Net Profit After Tax to Total Assets	5.6%	2.6 - 8.8%
Net Sales to Total Assets	2.6X	2.3 - 3.1X
Net Profit After Tax to Net Sales	1.9%	0.8 - 3.4%
Net Profit Before Tax to Net Worth	17.5%	10.5 - 25.6%
Net Profit Before Tax to Total Assets	7.4%	4.2 - 12.9%
EBIT to Total Assets	9.7%	6.7 - 14.7%
SALES ANALYSIS		
Net Sales($000)	$8,530	$7,582 - 9,658
Percent Sales Change from Prior Year	4.8%	0.1 - 18.1%
Sales Mix:		
Direct Sales	7.2%	2.9 - 9.7%
Warehouse Sales - Counter and Delivery	92.8%	90.3 - 97.1%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	80.6%	66.0 - 95.0%
Heating & Cooling Supplies & Equipment	9.9%	0.0 - 20.0%
Industrial P-V-F (Pipes-Valves-Fittings)	5.8%	0.0 - 6.0%
Other Industrial Supplies & Equipment	1.0%	0.0 - 0.0%
Other Products	2.7%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.6%	21.3 - 27.3%
Gross Margin on Direct Shipments	11.0%	8.9 - 13.5%
Gross Margin on Warehouse Sales	25.0%	23.3 - 27.5%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.92X	2.69 - 3.54X
Total Debt to Net Worth	105.2%	70.7 - 171.9%
Current Debt to Net Worth	95.4%	47.7 - 154.3%
Current Assets to Current Debt	1.99X	1.53 - 2.95X
Current Assets Minus Inventory/Curr Debt	0.90X	0.67 - 1.39X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	4.9 - 8.0
Average Invoice Size	$217	$151 - 334
Average Billing Line	$32.72	$23.87 - 45.74

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $7,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$202,880	$181,976 - 238,336
Gross Margin Per Employee	$48,627	$43,953 - 58,609
Average Compensation Per Employee	$24,465	$20,722 - 25,721
Average Fringe Benefits Per Employee	$4,175	$2,793 - 5,858
Compensation & Fringes Per Employee	$28,145	$23,526 - 30,597
Payroll to Net Sales	11.4%	10.3 - 12.8%
Fringe Benefits to Net Sales	2.0%	1.4 - 2.9%
Payroll & Fringes to Net Sales	12.4%	0.0 - 14.8%
Payroll to Gross Margin	47.5%	41.3 - 53.1%
Fringe Benefits to Gross Margin	7.9%	6.4 - 10.8%
Payroll & Fringes to Gross Margin	51.2%	0.0 - 58.5%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.62X	3.29 - 4.30X
% of Whse Sales from Non-Stock Items	7.8%	5.0 - 11.5%
Cost of In-Stock Whse Sales/Ave Inventory	3.36X	2.90 - 3.96X
No. of Days Average Inventory Carried	101 Days	85 - 111 Days
Total Cost of Goods Sold to Ave Inventory	4.26X	3.83 - 5.60X
Whse Gross Margin Return on Ave Inventory	131%	106 - 162%
Turn & Earn Profitability Index	96%	81 - 105%
Percent of Firms on LIFO	55.6%	
ACCOUNTS RECEIVABLE		
Average Collection Period	46 Days	41 - 62 Days
Gross Margin Return on Receivables	180%	151 - 224%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	66.9%	54.5 - 77.3%
31-60 Days Outstanding	16.6%	11.0 - 22.1%
61-90 Days Outstanding	7.4%	4.8 - 9.6%
Over 90 Days Outstanding	9.1%	4.9 - 11.5%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,412	$892 - 1,974
31-60 Days Outstanding	$1,321	$1,012 - 2,085
61-90 Days Outstanding	$1,512	$1,106 - 4,382
Over 90 Days Outstanding	$1,654	$1,034 - 4,320
Total	$1,600	$1,184 - 2,226
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	73.2%	73.1 - 82.3%
31-60 Days Outstanding	14.7%	7.2 - 18.7%
61-90 Days Outstanding	4.6%	2.8 - 5.3%
Over 90 Days Outstanding	7.5%	2.2 - 10.1%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $7,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.4%	72.7 - 78.7%
Gross Margin	24.6%	21.3 - 27.3%
Operating Expenses:		
Selling Expenses	5.3%	4.4 - 6.2%
Delivery Expenses	1.8%	1.4 - 1.9%
Warehouse Expenses	2.8%	1.4 - 3.4%
General & Administrative Expenses	10.2%	7.7 - 12.7%
Occupancy Expenses	2.5%	1.8 - 3.0%
Other Operating Expenses	0.2%	0.0 - 0.1%
Total Operating Expenses	22.7%	20.2 - 24.5%
Net Operating Profit	1.8%	0.5 - 4.6%
Non-Operating Income	2.4%	1.1 - 3.2%
Non-Operating Expenses	1.7%	0.9 - 2.5%
Net Profit Before Tax	2.5%	1.2 - 4.5%
Net Profit After Tax	1.9%	0.8 - 3.4%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.7%	20.2 - 24.5%
Total Operating Expense to Gross Margin	93.6%	82.8 - 98.3%
Non-People Expense to Net Sales	8.5%	7.3 - 9.1%
Non-People Expense to Gross Margin	34.6%	29.5 - 39.5%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.5%	0.3 - 1.2%
Times Interest Earned	5.3X	2.9 - 12.0X
BALANCE SHEET		
Cash	5.1%	0.5 - 7.2%
Accounts & Notes Receivable, Trade(Net)	33.6%	27.8 - 37.6%
Inventory	45.8%	39.4 - 53.6%
Other Current Assets	1.8%	0.1 - 1.8%
Total Current Assets	86.2%	82.2 - 92.2%
All Other Assets	13.8%	7.8 - 17.8%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	44.9%	31.1 - 56.0%
Total Long-Term Liabilities	9.0%	2.1 - 12.1%
Total Liabilities	53.9%	41.6 - 63.7%
Total Net Worth	46.1%	36.3 - 58.4%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	11.1%	6.1 - 19.7%
Total Assets to Net Worth	2.5X	1.8 - 3.9X
Net Profit After Tax to Total Assets	3.6%	1.3 - 7.3%
Net Sales to Total Assets	2.8X	2.3 - 3.0X
Net Profit After Tax to Net Sales	1.4%	0.5 - 2.8%
Net Profit Before Tax to Net Worth	15.2%	8.1 - 26.1%
Net Profit Before Tax to Total Assets	5.5%	2.0 - 12.0%
EBIT to Total Assets	8.3%	6.2 - 12.1%
SALES ANALYSIS		
Net Sales($000)	$22,823	$15,703 - 36,864
Percent Sales Change from Prior Year	15.5%	7.7 - 21.3%
Sales Mix:		
Direct Sales	11.2%	6.7 - 15.7%
Warehouse Sales - Counter and Delivery	88.8%	84.3 - 93.3%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	75.2%	60.0 - 89.8%
Heating & Cooling Supplies & Equipment	13.9%	0.0 - 25.0%
Industrial P-V-F (Pipes-Valves-Fittings)	4.9%	0.0 - 8.3%
Other Industrial Supplies & Equipment	2.2%	0.0 - 2.0%
Other Products	3.9%	0.0 - 5.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	22.7%	20.1 - 24.9%
Gross Margin on Direct Shipments	10.7%	8.8 - 12.9%
Gross Margin on Warehouse Sales	23.7%	22.4 - 26.3%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.02X	2.78 - 3.48X
Total Debt to Net Worth	150.1%	79.7 - 291.4%
Current Debt to Net Worth	101.8%	54.1 - 227.3%
Current Assets to Current Debt	2.13X	1.47 - 3.03X
Current Assets Minus Inventory/Curr Debt	0.92X	0.72 - 1.26X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	4.5 - 6.0
Average Invoice Size	$160	$137 - 240
Average Billing Line	$33.92	$22.15 - 48.00

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$238,043	$211,237 - 284,185
Gross Margin Per Employee	$51,767	$44,652 - 64,612
Average Compensation Per Employee	$25,364	$22,515 - 28,816
Average Fringe Benefits Per Employee	$4,686	$3,922 - 5,803
Compensation & Fringes Per Employee	$30,057	$26,894 - 34,661
Payroll to Net Sales	10.8%	9.4 - 12.0%
Fringe Benefits to Net Sales	2.0%	1.7 - 2.4%
Payroll & Fringes to Net Sales	11.7%	10.4 - 14.0%
Payroll to Gross Margin	48.4%	43.9 - 50.9%
Fringe Benefits to Gross Margin	8.9%	7.4 - 10.4%
Payroll & Fringes to Gross Margin	56.0%	46.4 - 59.5%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.54X	3.19 - 4.63X
% of Whse Sales from Non-Stock Items	10.0%	5.0 - 15.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.25X	2.68 - 4.16X
No. of Days Average Inventory Carried	103 Days	79 - 115 Days
Total Cost of Goods Sold to Ave Inventory	4.55X	3.81 - 5.48X
Whse Gross Margin Return on Ave Inventory	124%	97 - 145%
Turn & Earn Profitability Index	90%	71 - 112%
Percent of Firms on LIFO	69.2%	
ACCOUNTS RECEIVABLE		
Average Collection Period	51 Days	46 - 58 Days
Gross Margin Return on Receivables	155%	139 - 184%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	63.2%	55.9 - 67.2%
31-60 Days Outstanding	18.0%	15.9 - 21.9%
61-90 Days Outstanding	7.7%	6.3 - 9.4%
Over 90 Days Outstanding	11.2%	6.5 - 16.2%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$2,068	$1,605 - 2,828
31-60 Days Outstanding	$2,199	$1,605 - 3,253
61-90 Days Outstanding	$2,236	$1,602 - 4,123
Over 90 Days Outstanding	$2,904	$1,605 - 4,884
Total	$1,957	$1,491 - 3,176
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	67.7%	59.4 - 79.5%
31-60 Days Outstanding	16.7%	12.4 - 21.0%
61-90 Days Outstanding	7.0%	4.2 - 9.1%
Over 90 Days Outstanding	8.6%	4.0 - 10.8%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	77.3%	75.1 - 80.0%
Gross Margin	22.7%	20.1 - 24.9%
Operating Expenses:		
Selling Expenses	5.4%	4.2 - 6.1%
Delivery Expenses	2.0%	1.4 - 2.3%
Warehouse Expenses	2.6%	1.9 - 3.0%
General & Administrative Expenses	7.8%	6.5 - 8.9%
Occupancy Expenses	2.2%	1.5 - 2.8%
Other Operating Expenses	0.5%	0.0 - 0.3%
Total Operating Expenses	20.5%	18.4 - 22.6%
Net Operating Profit	2.2%	1.2 - 3.0%
Non-Operating Income	1.8%	1.2 - 2.2%
Non-Operating Expenses	1.9%	1.0 - 2.8%
Net Profit Before Tax	2.2%	0.7 - 3.4%
Net Profit After Tax	1.4%	0.5 - 2.8%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	20.5%	18.4 - 22.6%
Total Operating Expense to Gross Margin	90.7%	86.1 - 94.7%
Non-People Expense to Net Sales	7.5%	6.4 - 7.7%
Non-People Expense to Gross Margin	33.7%	28.9 - 37.3%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.0%	0.7 - 1.7%
Times Interest Earned	3.3X	1.5 - 6.8X
BALANCE SHEET		
Cash	1.7%	0.6 - 2.4%
Accounts & Notes Receivable, Trade(Net)	34.9%	29.3 - 40.9%
Inventory	48.0%	42.6 - 51.8%
Other Current Assets	1.7%	0.7 - 1.8%
Total Current Assets	86.2%	82.2 - 92.6%
All Other Assets	13.8%	7.4 - 17.8%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	44.1%	28.5 - 59.8%
Total Long-Term Liabilities	15.1%	2.3 - 24.6%
Total Liabilities	59.2%	46.3 - 74.6%
Total Net Worth	40.8%	25.4 - 53.7%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	17.4%	10.8 - 24.8%
Total Assets to Net Worth	1.9X	1.6 - 2.6X
Net Profit After Tax to Total Assets	8.3%	6.0 - 11.1%
Net Sales to Total Assets	2.7X	2.3 - 3.1X
Net Profit After Tax to Net Sales	3.3%	2.2 - 4.2%
Net Profit Before Tax to Net Worth	23.5%	17.0 - 31.8%
Net Profit Before Tax to Total Assets	11.7%	8.7 - 15.4%
EBIT to Total Assets	13.6%	10.7 - 17.1%
SALES ANALYSIS		
Net Sales($000)	$6,792	$3,104 - 11,066
Percent Sales Change from Prior Year	12.2%	4.1 - 19.0%
Sales Mix:		
Direct Sales	7.9%	3.2 - 10.0%
Warehouse Sales - Counter and Delivery	92.1%	90.0 - 96.8%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	78.1%	65.0 - 95.0%
Heating & Cooling Supplies & Equipment	13.3%	0.0 - 25.0%
Industrial P-V-F (Pipes-Valves-Fittings)	4.4%	0.0 - 5.0%
Other Industrial Supplies & Equipment	1.2%	0.0 - 0.0%
Other Products	3.1%	0.0 - 3.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.7%	23.0 - 27.3%
Gross Margin on Direct Shipments	10.1%	8.5 - 16.6%
Gross Margin on Warehouse Sales	26.3%	23.7 - 28.1%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.08X	2.73 - 3.57X
Total Debt to Net Worth	89.8%	55.0 - 160.6%
Current Debt to Net Worth	70.1%	42.3 - 133.6%
Current Assets to Current Debt	2.41X	1.76 - 3.24X
Current Assets Minus Inventory/Curr Debt	1.09X	0.79 - 1.48X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.5	5.0 - 10.0
Average Invoice Size	$158	$97 - 243
Average Billing Line	$27.47	$14.68 - 33.04

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$204,920	$180,104 - 264,318
Gross Margin Per Employee	$55,335	$45,420 - 66,264
Average Compensation Per Employee	$24,966	$21,472 - 29,926
Average Fringe Benefits Per Employee	$4,555	$3,412 - 5,941
Compensation & Fringes Per Employee	$29,173	$24,718 - 35,612
Payroll to Net Sales	11.5%	10.3 - 13.0%
Fringe Benefits to Net Sales	2.0%	1.6 - 2.5%
Payroll & Fringes to Net Sales	12.6%	9.9 - 14.7%
Payroll to Gross Margin	45.9%	41.7 - 49.7%
Fringe Benefits to Gross Margin	8.2%	6.5 - 9.6%
Payroll & Fringes to Gross Margin	51.3%	37.9 - 57.4%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.85X	3.25 - 5.13X
% of Whse Sales from Non-Stock Items	7.0%	2.5 - 12.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.48X	2.84 - 4.71X
No. of Days Average Inventory Carried	95 Days	71 - 112 Days
Total Cost of Goods Sold to Ave Inventory	4.73X	3.63 - 5.66X
Whse Gross Margin Return on Ave Inventory	141%	113 - 186%
Turn & Earn Profitability Index	104%	85 - 136%
Percent of Firms on LIFO	53.7%	
ACCOUNTS RECEIVABLE		
Average Collection Period	47 Days	41 - 58 Days
Gross Margin Return on Receivables	177%	154 - 228%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	64.8%	55.5 - 73.9%
31-60 Days Outstanding	17.4%	13.0 - 22.2%
61-90 Days Outstanding	7.8%	4.6 - 9.8%
Over 90 Days Outstanding	9.9%	4.7 - 14.7%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,508	$940 - 2,314
31-60 Days Outstanding	$1,642	$1,027 - 2,906
61-90 Days Outstanding	$1,596	$989 - 3,192
Over 90 Days Outstanding	$2,050	$1,025 - 3,833
Total	$1,552	$1,087 - 2,282
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	71.3%	62.9 - 81.8%
31-60 Days Outstanding	15.5%	10.8 - 20.2%
61-90 Days Outstanding	6.2%	3.5 - 8.8%
Over 90 Days Outstanding	7.0%	2.8 - 9.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.3%	72.7 - 77.0%
Gross Margin	25.7%	23.0 - 27.3%
Operating Expenses:		
Selling Expenses	5.8%	4.3 - 7.4%
Delivery Expenses	1.9%	1.1 - 2.5%
Warehouse Expenses	2.8%	1.6 - 3.4%
General & Administrative Expenses	8.4%	6.0 - 10.4%
Occupancy Expenses	2.2%	1.3 - 2.8%
Other Operating Expenses	0.4%	0.0 - 0.2%
Total Operating Expenses	21.4%	19.3 - 23.5%
Net Operating Profit	4.2%	2.9 - 5.4%
Non-Operating Income	2.1%	1.1 - 2.8%
Non-Operating Expenses	1.7%	0.9 - 2.4%
Net Profit Before Tax	4.7%	3.3 - 5.9%
Net Profit After Tax	3.3%	2.2 - 4.2%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	21.4%	19.3 - 23.5%
Total Operating Expense to Gross Margin	83.7%	78.4 - 88.0%
Non-People Expense to Net Sales	7.5%	6.2 - 8.4%
Non-People Expense to Gross Margin	29.6%	26.2 - 31.9%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.8%	0.3 - 1.2%
Times Interest Earned	6.7X	4.2 - 16.9X
BALANCE SHEET		
Cash	5.9%	0.8 - 6.0%
Accounts & Notes Receivable, Trade(Net)	33.8%	27.3 - 38.7%
Inventory	46.6%	39.7 - 54.5%
Other Current Assets	1.9%	0.1 - 2.1%
Total Current Assets	88.2%	84.5 - 94.5%
All Other Assets	11.8%	5.5 - 15.5%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	39.6%	27.6 - 51.2%
Total Long-Term Liabilities	8.6%	0.0 - 12.3%
Total Liabilities	48.2%	35.9 - 61.9%
Total Net Worth	51.8%	38.1 - 64.1%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

INDUSTRIAL P-V-F FIRMS

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	9.8%	4.5 - 17.7%
Total Assets to Net Worth	2.1X	1.5 - 2.9X
Net Profit After Tax to Total Assets	4.6%	2.1 - 7.6%
Net Sales to Total Assets	2.7X	2.4 - 3.1X
Net Profit After Tax to Net Sales	1.5%	0.7 - 2.8%
Net Profit Before Tax to Net Worth	14.0%	6.7 - 26.9%
Net Profit Before Tax to Total Assets	6.4%	2.9 - 12.5%
EBIT to Total Assets	8.9%	4.7 - 15.2%
SALES ANALYSIS		
Net Sales($000)	$7,961	$4,372 - 15,752
Percent Sales Change from Prior Year	13.5%	2.8 - 24.0%
Sales Mix:		
Direct Sales	11.6%	5.0 - 16.9%
Warehouse Sales - Counter and Delivery	88.4%	83.1 - 95.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	9.5%	0.0 - 15.8%
Heating & Cooling Supplies & Equipment	2.5%	0.0 - 0.0%
Industrial P-V-F (Pipes-Valves-Fittings)	81.3%	70.0 - 99.3%
Other Industrial Supplies & Equipment	3.9%	0.0 - 6.8%
Other Products	2.8%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.8%	23.2 - 29.3%
Gross Margin on Direct Shipments	11.6%	9.9 - 18.2%
Gross Margin on Warehouse Sales	27.7%	25.8 - 32.5%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.17X	2.85 - 3.65X
Total Debt to Net Worth	104.6%	52.1 - 193.5%
Current Debt to Net Worth	77.4%	36.1 - 138.9%
Current Assets to Current Debt	2.19X	1.79 - 3.50X
Current Assets Minus Inventory/Curr Debt	1.03X	0.83 - 1.56X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.5	3.8 - 6.5
Average Invoice Size	$259	$220 - 396
Average Billing Line	$59.30	$41.64 - 76.30

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$210,031	$186,512 - 248,051
Gross Margin Per Employee	$55,536	$48,199 - 64,802
Average Compensation Per Employee	$26,686	$23,075 - 30,909
Average Fringe Benefits Per Employee	$4,228	$3,627 - 6,444
Compensation & Fringes Per Employee	$31,865	$27,189 - 35,242
Payroll to Net Sales	13.1%	11.2 - 14.9%
Fringe Benefits to Net Sales	2.3%	2.0 - 2.9%
Payroll & Fringes to Net Sales	14.7%	12.1 - 17.9%
Payroll to Gross Margin	49.4%	44.7 - 52.5%
Fringe Benefits to Gross Margin	8.8%	7.3 - 10.9%
Payroll & Fringes to Gross Margin	56.4%	49.5 - 62.9%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.50X	3.05 - 4.60X
% of Whse Sales from Non-Stock Items	24.0%	10.0 - 35.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.07X	2.57 - 3.37X
No. of Days Average Inventory Carried	104 Days	79 - 120 Days
Total Cost of Goods Sold to Ave Inventory	4.57X	3.74 - 5.93X
Whse Gross Margin Return on Ave Inventory	143%	117 - 170%
Turn & Earn Profitability Index	99%	86 - 123%
Percent of Firms on LIFO	51.3%	
ACCOUNTS RECEIVABLE		
Average Collection Period	48 Days	43 - 56 Days
Gross Margin Return on Receivables	201%	161 - 241%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	66.5%	59.2 - 72.6%
31-60 Days Outstanding	20.2%	14.7 - 25.0%
61-90 Days Outstanding	6.9%	4.9 - 9.6%
Over 90 Days Outstanding	6.5%	1.4 - 11.1%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$2,419	$1,460 - 2,917
31-60 Days Outstanding	$1,456	$810 - 3,476
61-90 Days Outstanding	$1,527	$810 - 2,433
Over 90 Days Outstanding	$863	$556 - 2,587
Total	$1,921	$1,182 - 2,680
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	61.5%	53.1 - 70.2%
31-60 Days Outstanding	21.6%	18.0 - 26.8%
61-90 Days Outstanding	8.6%	5.8 - 11.0%
Over 90 Days Outstanding	8.3%	3.1 - 10.5%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	73.2%	70.7 - 76.8%
Gross Margin	26.8%	23.2 - 29.3%
Operating Expenses:		
Selling Expenses	7.8%	5.5 - 9.5%
Delivery Expenses	2.2%	1.5 - 2.7%
Warehouse Expenses	3.5%	1.8 - 4.2%
General & Administrative Expenses	8.7%	5.7 - 10.3%
Occupancy Expenses	1.8%	0.9 - 2.0%
Other Operating Expenses	0.6%	0.0 - 0.1%
Total Operating Expenses	24.6%	20.2 - 25.9%
Net Operating Profit	2.2%	0.9 - 3.6%
Non-Operating Income	1.2%	0.4 - 1.6%
Non-Operating Expenses	2.0%	1.0 - 2.3%
Net Profit Before Tax	1.5%	0.7 - 3.5%
Net Profit After Tax	1.5%	0.7 - 2.8%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	24.6%	20.2 - 25.9%
Total Operating Expense to Gross Margin	92.3%	84.8 - 96.9%
Non-People Expense to Net Sales	9.4%	7.0 - 9.1%
Non-People Expense to Gross Margin	34.3%	27.6 - 36.0%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.7%	0.4 - 1.2%
Times Interest Earned	3.6X	2.0 - 8.9X
BALANCE SHEET		
Cash	3.0%	0.4 - 3.6%
Accounts & Notes Receivable, Trade(Net)	36.3%	29.3 - 38.5%
Inventory	45.4%	40.3 - 52.5%
Other Current Assets	1.5%	0.2 - 1.7%
Total Current Assets	86.1%	79.1 - 91.1%
All Other Assets	13.9%	8.9 - 20.9%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	38.6%	23.6 - 51.7%
Total Long-Term Liabilities	12.5%	2.6 - 21.1%
Total Liabilities	51.1%	34.3 - 66.9%
Total Net Worth	48.9%	33.1 - 65.8%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES UNDER $4,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	12.4%	3.5 - 19.5%
Total Assets to Net Worth	2.3X	1.8 - 3.2X
Net Profit After Tax to Total Assets	6.0%	1.6 - 7.7%
Net Sales to Total Assets	2.6X	2.4 - 3.2X
Net Profit After Tax to Net Sales	1.9%	0.6 - 2.6%
Net Profit Before Tax to Net Worth	21.5%	11.4 - 24.2%
Net Profit-Before Tax to Total Assets	7.3%	2.5 - 11.7%
EBIT to Total Assets	8.0%	5.9 - 11.1%
SALES ANALYSIS		
Net Sales($000)	$3,031	$2,664 - 3,335
Percent Sales Change from Prior Year	19.0%	5.1 - 24.3%
Sales Mix:		
Direct Sales	8.3%	
Warehouse Sales - Counter and Delivery	91.7%	
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	8.1%	0.0 - 13.8%
Heating & Cooling Supplies & Equipment	2.5%	0.0 - 0.0%
Industrial P-V-F (Pipes-Valves-Fittings)	85.9%	80.0 - 96.8%
Other Industrial Supplies & Equipment	3.5%	0.0 - 8.8%
Other Products	0.0%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	33.0%	
Gross Margin on Direct Shipments	11.0%	
Gross Margin on Warehouse Sales	33.6%	
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.30X	2.86 - 3.65X
Total Debt to Net Worth	127.1%	78.4 - 220.8%
Current Debt to Net Worth	117.1%	55.7 - 143.7%
Current Assets to Current Debt	2.18X	1.80 - 3.24X
Current Assets Minus Inventory/Curr Debt	1.00X	0.91 - 1.49X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.3	
Average Invoice Size	$253	
Average Billing Line	$66.02	

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES UNDER $4,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$171,125	$133,520 - 204,538
Gross Margin Per Employee	$51,692	$46,322 - 62,486
Average Compensation Per Employee	$26,338	$23,355 - 29,460
Average Fringe Benefits Per Employee	$3,681	
Compensation & Fringes Per Employee	$30,779	$26,683 - 32,522
Payroll to Net Sales	16.2%	12.5 - 17.6%
Fringe Benefits to Net Sales	2.8%	
Payroll & Fringes to Net Sales	15.6%	12.2 - 19.7%
Payroll to Gross Margin	49.8%	43.8 - 51.9%
Fringe Benefits to Gross Margin	8.3%	
Payroll & Fringes to Gross Margin	52.4%	41.9 - 60.2%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.90X	
% of Whse Sales from Non-Stock Items	35.0%	
Cost of In-Stock Whse Sales/Ave Inventory	3.11X	
No. of Days Average Inventory Carried	75 Days	
Total Cost of Goods Sold to Ave Inventory	5.38X	4.68 - 6.10X
Whse Gross Margin Return on Ave Inventory	239%	
Turn & Earn Profitability Index	161%	
Percent of Firms on LIFO	37.5%	
ACCOUNTS RECEIVABLE		
Average Collection Period	48 Days	
Gross Margin Return on Receivables	263%	
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	66.5%	
31-60 Days Outstanding	23.0%	
61-90 Days Outstanding	7.3%	
Over 90 Days Outstanding	3.1%	
Total	100.0%	
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,637	
31-60 Days Outstanding	$886	
61-90 Days Outstanding	$1,642	
Over 90 Days Outstanding	$855	
Total	$1,639	
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	53.6%	
31-60 Days Outstanding	28.2%	
61-90 Days Outstanding	10.7%	
Over 90 Days Outstanding	7.5%	
Total	100.0%	

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES UNDER $4,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	
Cost of Goods Sold	67.0%	
Gross Margin	33.0%	
Operating Expenses:		
Selling Expenses	7.3%	
Delivery Expenses	2.7%	
Warehouse Expenses	5.6%	
General & Administrative Expenses	11.4%	
Occupancy Expenses	2.8%	
Other Operating Expenses	1.0%	
Total Operating Expenses	30.7%	
Net Operating Profit	2.3%	
Non-Operating Income	1.4%	
Non-Operating Expenses	1.6%	
Net Profit Before Tax	1.9%	
Net Profit After Tax	1.9%	0.6 - 2.6%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	30.7%	
Total Operating Expense to Gross Margin	91.3%	
Non-People Expense to Net Sales	15.1%	
Non-People Expense to Gross Margin	35.8%	
INTEREST EXPENSE		
Interest Expense to Net Sales	1.0%	0.5 - 1.8%
Times Interest Earned	3.2X	1.6 - 9.9X
BALANCE SHEET		
Cash	5.9%	0.8 - 9.3%
Accounts & Notes Receivable, Trade(Net)	33.9%	24.3 - 38.5%
Inventory	44.2%	33.9 - 54.3%
Other Current Assets	2.5%	1.1 - 3.8%
Total Current Assets	86.4%	79.5 - 93.5%
All Other Assets	13.6%	6.5 - 20.5%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	40.6%	24.5 - 53.5%
Total Long-Term Liabilities	22.0%	8.0 - 31.4%
Total Liabilities	62.6%	55.2 - 73.8%
Total Net Worth	37.4%	26.2 - 44.4%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES $4,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	10.0%	0.1 - 26.4%
Total Assets to Net Worth	2.0X	1.4 - 2.9X
Net Profit After Tax to Total Assets	4.0%	0.0 - 12.6%
Net Sales to Total Assets	3.0X	2.6 - 3.6X
Net Profit After Tax to Net Sales	1.2%	0.0 - 4.3%
Net Profit Before Tax to Net Worth	16.6%	0.3 - 35.0%
Net Profit Before Tax to Total Assets	6.4%	0.1 - 13.1%
EBIT to Total Assets	9.8%	2.4 - 14.4%
SALES ANALYSIS		
Net Sales($000)	$7,068	$4,619 - 7,693
Percent Sales Change from Prior Year	8.4%	0.4 - 20.0%
Sales Mix:		
Direct Sales	8.3%	3.6 - 13.7%
Warehouse Sales - Counter and Delivery	91.7%	86.3 - 96.4%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	10.6%	0.0 - 16.9%
Heating & Cooling Supplies & Equipment	2.0%	0.0 - 0.0%
Industrial P-V-F (Pipes-Valves-Fittings)	77.2%	61.3 - 92.8%
Other Industrial Supplies & Equipment	4.3%	0.0 - 6.3%
Other Products	5.9%	0.0 - 4.3%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	27.3%	23.4 - 28.0%
Gross Margin on Direct Shipments	14.6%	10.0 - 18.2%
Gross Margin on Warehouse Sales	27.6%	26.7 - 32.3%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.22X	2.89 - 4.10X
Total Debt to Net Worth	102.8%	36.9 - 189.6%
Current Debt to Net Worth	94.9%	28.3 - 173.5%
Current Assets to Current Debt	1.97X	1.59 - 5.03X
Current Assets Minus Inventory/Curr Debt	0.94X	0.70 - 1.55X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	3.9 - 8.0
Average Invoice Size	$258	$199 - 353
Average Billing Line	$51.96	$38.05 - 64.39

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES $4,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$194,605	$140,487 - 246,494
Gross Margin Per Employee	$53,833	$44,292 - 63,930
Average Compensation Per Employee	$26,557	$24,103 - 28,141
Average Fringe Benefits Per Employee	$4,212	$3,388 - 6,785
Compensation & Fringes Per Employee	$32,227	$27,523 - 35,809
Payroll to Net Sales	13.9%	11.8 - 16.4%
Fringe Benefits to Net Sales	2.6%	2.2 - 3.5%
Payroll & Fringes to Net Sales	16.6%	14.1 - 18.6%
Payroll to Gross Margin	51.6%	47.7 - 54.3%
Fringe Benefits to Gross Margin	9.3%	7.9 - 11.3%
Payroll & Fringes to Gross Margin	62.5%	52.1 - 66.6%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.28X	2.93 - 4.52X
% of Whse Sales from Non-Stock Items	25.0%	10.0 - 36.0%
Cost of In-Stock Whse Sales/Ave Inventory	2.84X	2.36 - 3.36X
No. of Days Average Inventory Carried	111 Days	82 - 125 Days
Total Cost of Goods Sold to Ave Inventory	4.04X	3.17 - 6.83X
Whse Gross Margin Return on Ave Inventory	133%	125 - 167%
Turn & Earn Profitability Index	99%	90 - 110%
Percent of Firms on LIFO	42.9%	
ACCOUNTS RECEIVABLE		
Average Collection Period	48 Days	43 - 53 Days
Gross Margin Return on Receivables	209%	176 - 243%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	70.8%	63.5 - 78.7%
31-60 Days Outstanding	17.7%	12.8 - 22.8%
61-90 Days Outstanding	5.4%	2.9 - 6.7%
Over 90 Days Outstanding	6.1%	2.5 - 10.0%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$2,094	$1,270 - 2,591
31-60 Days Outstanding	$1,256	$784 - 1,839
61-90 Days Outstanding	$1,049	$679 - 1,444
Over 90 Days Outstanding	$822	$523 - 2,252
Total	$1,633	$1,074 - 1,957
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	63.2%	50.1 - 74.4%
31-60 Days Outstanding	20.7%	16.7 - 24.8%
61-90 Days Outstanding	8.6%	5.4 - 10.2%
Over 90 Days Outstanding	7.5%	3.0 - 9.8%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES $4,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	72.7%	72.0 - 76.6%
Gross Margin	27.3%	23.4 - 28.0%
Operating Expenses:		
Selling Expenses	8.3%	7.4 - 9.5%
Delivery Expenses	2.3%	1.7 - 3.0%
Warehouse Expenses	3.5%	1.8 - 3.9%
General & Administrative Expenses	9.0%	5.6 - 11.1%
Occupancy Expenses	1.6%	1.0 - 2.0%
Other Operating Expenses	0.1%	0.0 - 0.0%
Total Operating Expenses	24.8%	21.4 - 25.9%
Net Operating Profit	2.5%	0.1 - 4.6%
Non-Operating Income	1.0%	0.3 - 1.5%
Non-Operating Expenses	1.6%	1.1 - 2.0%
Net Profit Before Tax	2.0%	0.1 - 3.5%
Net Profit After Tax	1.2%	0.0 - 4.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	24.8%	21.4 - 25.9%
Total Operating Expense to Gross Margin	90.0%	79.6 - 99.7%
Non-People Expense to Net Sales	9.0%	7.2 - 8.9%
Non-People Expense to Gross Margin	31.9%	27.6 - 35.6%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.6%	0.2 - 1.2%
Times Interest Earned	2.8X	1.2 - 4.9X
BALANCE SHEET		
Cash	2.2%	0.2 - 2.7%
Accounts & Notes Receivable, Trade(Net)	39.7%	31.5 - 40.3%
Inventory	45.3%	40.6 - 58.0%
Other Current Assets	1.0%	0.2 - 1.2%
Total Current Assets	88.2%	84.2 - 92.1%
All Other Assets	11.9%	7.9 - 15.8%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	39.7%	18.6 - 54.4%
Total Long-Term Liabilities	7.2%	0.2 - 11.5%
Total Liabilities	46.9%	26.7 - 65.5%
Total Net Worth	53.1%	34.6 - 73.3%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	9.2%	6.0 - 14.8%
Total Assets to Net Worth	1.9X	1.5 - 2.7X
Net Profit After Tax to Total Assets	4.5%	2.9 - 6.7%
Net Sales to Total Assets	2.5X	2.3 - 3.0X
Net Profit After Tax to Net Sales	0.4%	1.2 - 2.3%
Net Profit Before Tax to Net Worth	12.8%	8.0 - 23.6%
Net Profit Before Tax to Total Assets	5.2%	4.1 - 12.3%
EBIT to Total Assets	9.4%	6.4 - 15.1%
SALES ANALYSIS		
Net Sales($000)	$20,358	$14,568 - 36,036
Percent Sales Change from Prior Year	15.7%	6.9 - 21.5%
Sales Mix:		
Direct Sales	15.2%	9.1 - 21.8%
Warehouse Sales - Counter and Delivery	84.8%	78.3 - 90.9%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	9.3%	0.0 - 15.6%
Heating & Cooling Supplies & Equipment	3.0%	0.0 - 2.9%
Industrial P-V-F (Pipes-Valves-Fittings)	82.4%	70.3 - 100.0%
Other Industrial Supplies & Equipment	3.8%	0.0 - 5.8%
Other Products	1.5%	0.0 - 1.5%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	23.0%	17.9 - 25.6%
Gross Margin on Direct Shipments	10.9%	9.7 - 13.9%
Gross Margin on Warehouse Sales	26.2%	24.8 - 28.9%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.12X	2.76 - 3.52X
Total Debt to Net Worth	89.8%	53.2 - 174.3%
Current Debt to Net Worth	66.8%	37.2 - 111.4%
Current Assets to Current Debt	3.00X	1.93 - 3.38X
Current Assets Minus Inventory/Curr Debt	1.21X	0.87 - 1.52X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.3	3.7 - 6.3
Average Invoice Size	$276	$227 - 480
Average Billing Line	$67.51	$46.50 - 90.87

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$225,945	$210,255 - 258,624
Gross Margin Per Employee	$57,781	$49,601 - 64,984
Average Compensation Per Employee	$27,037	$22,569 - 31,581
Average Fringe Benefits Per Employee	$4,416	$3,940 - 6,660
Compensation & Fringes Per Employee	$32,428	$27,368 - 35,737
Payroll to Net Sales	12.1%	9.8 - 13.3%
Fringe Benefits to Net Sales	2.1%	1.5 - 2.7%
Payroll & Fringes to Net Sales	13.6%	11.8 - 15.7%
Payroll to Gross Margin	47.1%	44.5 - 50.4%
Fringe Benefits to Gross Margin	8.7%	6.9 - 11.4%
Payroll & Fringes to Gross Margin	55.1%	50.4 - 59.3%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.50X	3.27 - 4.32X
% of Whse Sales from Non-Stock Items	11.7%	5.5 - 25.5%
Cost of In-Stock Whse Sales/Ave Inventory	3.13X	2.88 - 3.41X
No. of Days Average Inventory Carried	104 Days	84 - 112 Days
Total Cost of Goods Sold to Ave Inventory	4.43X	3.79 - 5.10X
Whse Gross Margin Return on Ave Inventory	134%	110 - 158%
Turn & Earn Profitability Index	95%	86 - 119%
Percent of Firms on LIFO	64.7%	
ACCOUNTS RECEIVABLE		
Average Collection Period	49 Days	45 - 60 Days
Gross Margin Return on Receivables	181%	149 - 204%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	62.7%	55.7 - 70.7%
31-60 Days Outstanding	21.3%	17.7 - 25.5%
61-90 Days Outstanding	8.0%	6.1 - 10.0%
Over 90 Days Outstanding	7.9%	3.7 - 12.2%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$3,055	$2,419 - 4,000
31-60 Days Outstanding	$3,476	$1,827 - 4,453
61-90 Days Outstanding	$4,663	$1,718 - 5,596
Over 90 Days Outstanding	$1,914	$775 - 3,160
Total	$2,973	$2,596 - 3,958
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	62.9%	55.0 - 67.8%
31-60 Days Outstanding	19.8%	18.9 - 20.7%
61-90 Days Outstanding	7.6%	5.1 - 10.0%
Over 90 Days Outstanding	9.7%	7.1 - 14.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	77.0%	74.4 - 82.1%
Gross Margin	23.0%	17.9 - 25.6%
Operating Expenses:		
Selling Expenses	7.5%	5.3 - 8.5%
Delivery Expenses	1.8%	1.3 - 2.2%
Warehouse Expenses	2.4%	1.7 - 3.0%
General & Administrative Expenses	6.9%	5.3 - 7.8%
Occupancy Expenses	1.6%	1.0 - 1.7%
Other Operating Expenses	0.9%	0.0 - 0.1%
Total Operating Expenses	21.1%	19.6 - 23.4%
Net Operating Profit	1.9%	1.1 - 3.3%
Non-Operating Income	1.2%	0.4 - 1.6%
Non-Operating Expenses	2.7%	1.0 - 2.0%
Net Profit Before Tax	0.4%	1.3 - 2.8%
Net Profit After Tax	0.4%	1.2 - 2.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	21.1%	19.6 - 23.4%
Total Operating Expense to Gross Margin	95.6%	86.8 - 95.0%
Non-People Expense to Net Sales	7.9%	6.8 - 8.0%
Non-People Expense to Gross Margin	36.7%	28.7 - 34.6%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.0%	0.6 - 1.1%
Times Interest Earned	4.0X	2.3 - 8.9X
BALANCE SHEET		
Cash	2.3%	0.4 - 2.2%
Accounts & Notes Receivable, Trade(Net)	34.5%	29.5 - 38.4%
Inventory	46.0%	43.3 - 49.2%
Other Current Assets	1.5%	0.3 - 1.6%
Total Current Assets	84.2%	77.3 - 89.9%
All Other Assets	15.8%	10.1 - 22.7%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	36.7%	23.5 - 48.5%
Total Long-Term Liabilities	12.4%	3.8 - 21.2%
Total Liabilities	49.0%	34.7 - 63.4%
Total Net Worth	51.0%	36.6 - 65.3%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HIGH PROFIT INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	17.0%	11.4 - 23.8%
Total Assets to Net Worth	1.9X	1.5 - 3.0X
Net Profit After Tax to Total Assets	7.7%	5.9 - 11.8%
Net Sales to Total Assets	2.9X	2.5 - 3.3X
Net Profit After Tax to Net Sales	2.8%	1.9 - 4.4%
Net Profit Before Tax to Net Worth	25.2%	19.4 - 38.8%
Net Profit Before Tax to Total Assets	12.7%	8.6 - 15.3%
EBIT to Total Assets	15.6%	10.8 - 17.5%
SALES ANALYSIS		
Net Sales($000)	$7,961	$3,882 - 14,839
Percent Sales Change from Prior Year	16.3%	7.8 - 27.0%
Sales Mix:		
Direct Sales	10.6%	5.0 - 15.2%
Warehouse Sales - Counter and Delivery	89.4%	84.8 - 95.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	12.0%	0.0 - 20.0%
Heating & Cooling Supplies & Equipment	2.8%	0.0 - 0.0%
Industrial P-V-F (Pipes-Valves-Fittings)	80.7%	70.5 - 98.8%
Other Industrial Supplies & Equipment	3.9%	0.0 - 8.8%
Other Products	0.6%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.9%	23.4 - 29.5%
Gross Margin on Direct Shipments	10.4%	10.0 - 14.6%
Gross Margin on Warehouse Sales	29.4%	25.6 - 32.6%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.51X	2.85 - 3.86X
Total Debt to Net Worth	89.9%	51.4 - 198.5%
Current Debt to Net Worth	88.7%	36.1 - 140.3%
Current Assets to Current Debt	2.07X	1.80 - 3.36X
Current Assets Minus Inventory/Curr Debt	0.97X	0.81 - 1.45X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	4.3 - 7.5
Average Invoice Size	$253	$223 - 373
Average Billing Line	$46.04	$39.15 - 74.55

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HIGH PROFIT INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$247,522	$198,251 - 276,344
Gross Margin Per Employee	$64,742	$56,814 - 72,680
Average Compensation Per Employee	$28,877	$24,820 - 32,820
Average Fringe Benefits Per Employee	$4,203	$3,361 - 6,717
Compensation & Fringes Per Employee	$34,898	$30,161 - 36,110
Payroll to Net Sales	12.2%	11.1 - 14.2%
Fringe Benefits to Net Sales	2.2%	1.5 - 2.8%
Payroll & Fringes to Net Sales	13.4%	11.8 - 16.1%
Payroll to Gross Margin	47.4%	40.8 - 51.2%
Fringe Benefits to Gross Margin	7.7%	5.8 - 10.5%
Payroll & Fringes to Gross Margin	50.7%	43.6 - 59.2%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.37X	3.31 - 5.68X
% of Whse Sales from Non-Stock Items	31.9%	20.1 - 35.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.41X	2.98 - 3.63X
No. of Days Average Inventory Carried	84 Days	64 - 110 Days
Total Cost of Goods Sold to Ave Inventory	4.62X	4.08 - 6.04X
Whse Gross Margin Return on Ave Inventory	164%	150 - 189%
Turn & Earn Profitability Index	115%	104 - 127%
Percent of Firms on LIFO	61.1%	
ACCOUNTS RECEIVABLE		
Average Collection Period	44 Days	40 - 50 Days
Gross Margin Return on Receivables	223%	196 - 268%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	67.4%	61.8 - 74.3%
31-60 Days Outstanding	18.8%	14.2 - 23.4%
61-90 Days Outstanding	7.6%	5.1 - 10.7%
Over 90 Days Outstanding	6.2%	1.0 - 11.1%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$2,273	$1,751 - 2,651
31-60 Days Outstanding	$1,483	$816 - 2,507
61-90 Days Outstanding	$1,584	$1,343 - 3,945
Over 90 Days Outstanding	$1,679	$623 - 2,848
Total	$1,846	$1,588 - 2,772
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	64.9%	56.3 - 74.6%
31-60 Days Outstanding	22.6%	17.3 - 27.3%
61-90 Days Outstanding	8.0%	4.3 - 10.2%
Over 90 Days Outstanding	4.5%	2.6 - 6.5%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HIGH PROFIT INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.1%	70.5 - 76.7%
Gross Margin	25.9%	23.4 - 29.5%
Operating Expenses:		
Selling Expenses	7.3%	5.5 - 9.0%
Delivery Expenses	1.8%	1.4 - 2.3%
Warehouse Expenses	3.2%	1.7 - 4.1%
General & Administrative Expenses	7.2%	6.1 - 8.5%
Occupancy Expenses	1.1%	0.6 - 1.7%
Other Operating Expenses	0.3%	0.0 - 0.0%
Total Operating Expenses	20.9%	19.8 - 23.2%
Net Operating Profit	5.1%	3.2 - 6.4%
Non-Operating Income	1.1%	0.2 - 1.5%
Non-Operating Expenses	1.7%	1.1 - 2.1%
Net Profit Before Tax	4.4%	2.5 - 6.2%
Net Profit After Tax	2.8%	1.9 - 4.4%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	20.9%	19.8 - 23.2%
Total Operating Expense to Gross Margin	80.4%	75.0 - 87.8%
Non-People Expense to Net Sales	6.9%	5.7 - 7.8%
Non-People Expense to Gross Margin	26.2%	22.4 - 27.6%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.6%	0.3 - 1.0%
Times Interest Earned	8.9X	4.3 - 11.9X
BALANCE SHEET		
Cash	4.2%	0.7 - 5.2%
Accounts & Notes Receivable, Trade(Net)	36.8%	28.9 - 38.6%
Inventory	44.7%	39.6 - 52.6%
Other Current Assets	1.1%	0.2 - 1.2%
Total Current Assets	86.8%	83.2 - 90.6%
All Other Assets	13.3%	9.4 - 16.8%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	37.8%	22.7 - 50.9%
Total Long-Term Liabilities	11.2%	2.1 - 14.6%
Total Liabilities	49.0%	33.8 - 67.0%
Total Net Worth	51.0%	33.0 - 66.2%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

PLUMBING SUPPLIES & EQUIPMENT AND INDUSTRIAL P-V-F FIRMS

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	8.9%	2.9 - 14.7%
Total Assets to Net Worth	1.8X	1.5 - 2.8X
Net Profit After Tax to Total Assets	4.7%	1.8 - 7.3%
Net Sales to Total Assets	2.7X	2.4 - 3.0X
Net Profit After Tax to Net Sales	1.6%	0.7 - 2.7%
Net Profit Before Tax to Net Worth	12.6%	7.6 - 20.7%
Net Profit Before Tax to Total Assets	5.9%	2.5 - 8.7%
EBIT to Total Assets	8.6%	6.9 - 12.8%
SALES ANALYSIS		
Net Sales($000)	$7,002	$4,662 - 15,061
Percent Sales Change from Prior Year	13.8%	7.0 - 19.6%
Sales Mix:		
Direct Sales	9.4%	4.6 - 13.0%
Warehouse Sales - Counter and Delivery	90.6%	87.0 - 95.4%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	41.6%	36.0 - 50.0%
Heating & Cooling Supplies & Equipment	24.7%	19.0 - 32.0%
Industrial P-V-F (Pipes-Valves-Fittings)	22.1%	15.0 - 29.0%
Other Industrial Supplies & Equipment	5.6%	0.0 - 10.0%
Other Products	6.1%	0.0 - 9.7%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.8%	22.2 - 26.7%
Gross Margin on Direct Shipments	12.0%	10.5 - 13.7%
Gross Margin on Warehouse Sales	25.6%	23.7 - 29.9%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.13X	2.74 - 3.51X
Total Debt to Net Worth	75.7%	47.1 - 183.5%
Current Debt to Net Worth	56.7%	35.6 - 127.9%
Current Assets to Current Debt	2.58X	1.72 - 4.14X
Current Assets Minus Inventory/Curr Debt	1.06X	0.76 - 1.55X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	4.1 - 8.0
Average Invoice Size	$184	$137 - 208
Average Billing Line	$29.69	$23.56 - 41.62

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$202,179	$177,485 - 242,625
Gross Margin Per Employee	$47,805	$39,649 - 56,166
Average Compensation Per Employee	$24,170	$20,443 - 26,844
Average Fringe Benefits Per Employee	$4,028	$3,244 - 4,937
Compensation & Fringes Per Employee	$28,233	$24,717 - 30,847
Payroll to Net Sales	13.0%	10.5 - 14.8%
Fringe Benefits to Net Sales	2.0%	1.8 - 2.5%
Payroll & Fringes to Net Sales	14.4%	12.1 - 16.4%
Payroll to Gross Margin	50.6%	47.5 - 54.6%
Fringe Benefits to Gross Margin	8.5%	7.1 - 9.8%
Payroll & Fringes to Gross Margin	59.2%	52.1 - 62.8%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.89X	3.18 - 4.21X
% of Whse Sales from Non-Stock Items	12.5%	8.8 - 18.7%
Cost of In-Stock Whse Sales/Ave Inventory	3.18X	2.69 - 3.66X
No. of Days Average Inventory Carried	94 Days	87 - 115 Days
Total Cost of Goods Sold to Ave Inventory	4.24X	3.51 - 4.96X
Whse Gross Margin Return on Ave Inventory	125%	114 - 148%
Turn & Earn Profitability Index	91%	89 - 109%
Percent of Firms on LIFO	51.5%	
ACCOUNTS RECEIVABLE		
Average Collection Period	48 Days	41 - 55 Days
Gross Margin Return on Receivables	187%	161 - 216%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	66.7%	63.1 - 73.8%
31-60 Days Outstanding	18.7%	13.7 - 21.6%
61-90 Days Outstanding	8.0%	5.2 - 9.7%
Over 90 Days Outstanding	6.7%	3.6 - 8.3%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,149	$670 - 1,774
31-60 Days Outstanding	$1,450	$884 - 2,303
61-90 Days Outstanding	$1,481	$839 - 2,120
Over 90 Days Outstanding	$1,566	$976 - 2,250
Total	$1,194	$753 - 1,883
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	66.6%	61.2 - 75.7%
31-60 Days Outstanding	18.6%	11.9 - 22.3%
61-90 Days Outstanding	8.0%	5.7 - 10.5%
Over 90 Days Outstanding	6.9%	3.2 - 9.9%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.2%	73.3 - 77.8%
Gross Margin	24.8%	22.2 - 26.7%
Operating Expenses:		
Selling Expenses	6.9%	5.7 - 8.7%
Delivery Expenses	1.9%	1.4 - 2.4%
Warehouse Expenses	2.6%	1.8 - 3.0%
General & Administrative Expenses	8.9%	6.3 - 10.4%
Occupancy Expenses	1.6%	0.8 - 2.4%
Other Operating Expenses	0.4%	0.0 - 0.0%
Total Operating Expenses	22.3%	19.9 - 25.2%
Net Operating Profit	2.5%	0.5 - 4.1%
Non-Operating Income	1.9%	1.3 - 2.5%
Non-Operating Expenses	1.9%	1.2 - 2.6%
Net Profit Before Tax	2.5%	0.9 - 3.3%
Net Profit After Tax	1.6%	0.7 - 2.7%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.3%	19.9 - 25.2%
Total Operating Expense to Gross Margin	90.5%	84.9 - 97.7%
Non-People Expense to Net Sales	7.5%	6.5 - 8.5%
Non-People Expense to Gross Margin	30.5%	26.0 - 35.4%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.7%	0.3 - 1.5%
Times Interest Earned	4.4X	1.8 - 15.4X
BALANCE SHEET		
Cash	3.8%	0.2 - 4.4%
Accounts & Notes Receivable, Trade(Net)	31.6%	23.3 - 35.8%
Inventory	47.6%	41.6 - 55.1%
Other Current Assets	3.8%	0.4 - 3.3%
Total Current Assets	86.9%	83.0 - 92.2%
All Other Assets	13.1%	7.8 - 17.0%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	35.6%	21.3 - 50.5%
Total Long-Term Liabilities	15.8%	1.8 - 24.7%
Total Liabilities	51.4%	33.0 - 67.1%
Total Net Worth	48.6%	32.9 - 67.0%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	6.6%	
Total Assets to Net Worth	1.8X	
Net Profit After Tax to Total Assets	1.3%	
Net Sales to Total Assets	1.9X	
Net Profit After Tax to Net Sales	0.3%	
Net Profit Before Tax to Net Worth	8.1%	
Net Profit Before Tax to Total Assets	1.6%	
EBIT to Total Assets	10.3%	
SALES ANALYSIS		
Net Sales($000)	$1,599	
Percent Sales Change from Prior Year	3.5%	
Sales Mix:		
Direct Sales	0.0%	
Warehouse Sales - Counter and Delivery	100.0%	
TOTAL SALES	100.0%	
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	41.3%	
Heating & Cooling Supplies & Equipment	30.3%	
Industrial P-V-F (Pipes-Valves-Fittings)	25.3%	
Other Industrial Supplies & Equipment	3.0%	
Other Products	0.1%	
TOTAL SALES	100.0%	
GROSS MARGIN		
Gross Margin on Net Sales	25.6%	
Gross Margin on Direct Shipments		INSUFFICIENT DATA
Gross Margin on Warehouse Sales		INSUFFICIENT DATA
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.30X	
Total Debt to Net Worth	75.0%	
Current Debt to Net Worth	31.5%	
Current Assets to Current Debt	6.15X	
Current Assets Minus Inventory/Curr Debt	1.55X	
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	7.0	
Average Invoice Size	$184	
Average Billing Line	$26.27	

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$129,595	
Gross Margin Per Employee	$33,407	
Average Compensation Per Employee	$18,883	
Average Fringe Benefits Per Employee	$2,509	
Compensation & Fringes Per Employee	$20,972	
Payroll to Net Sales	16.2%	
Fringe Benefits to Net Sales	2.3%	
Payroll & Fringes to Net Sales	15.0%	
Payroll to Gross Margin	53.5%	
Fringe Benefits to Gross Margin	7.4%	
Payroll & Fringes to Gross Margin	60.3%	
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	INSUFFICIENT DATA	
% of Whse Sales from Non-Stock Items	17.0%	
Cost of In-Stock Whse Sales/Ave Inventory	INSUFFICIENT DATA	
No. of Days Average Inventory Carried	INSUFFICIENT DATA	
Total Cost of Goods Sold to Ave Inventory	2.23X	
Whse Gross Margin Return on Ave Inventory	INSUFFICIENT DATA	
Turn & Earn Profitability Index	INSUFFICIENT DATA	
Percent of Firms on LIFO	20.0%	
ACCOUNTS RECEIVABLE		
Average Collection Period	32 Days	
Gross Margin Return on Receivables	414%	
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	75.0%	
31-60 Days Outstanding	13.8%	
61-90 Days Outstanding	9.2%	
Over 90 Days Outstanding	2.0%	
Total	100.0%	
Average Account Balance:		
Current (0-30 Days Outstanding)	$596	
31-60 Days Outstanding	$600	
61-90 Days Outstanding	$554	
Over 90 Days Outstanding	INSUFFICIENT DATA	
Total	$634	
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	71.7%	
31-60 Days Outstanding	17.3%	
61-90 Days Outstanding	9.4%	
Over 90 Days Outstanding	1.6%	
Total	100.0%	

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	
Cost of Goods Sold	74.4%	
Gross Margin	25.6%	
Operating Expenses:		
Selling Expenses	9.6%	
Delivery Expenses	1.9%	
Warehouse Expenses	3.1%	
General & Administrative Expenses	6.3%	
Occupancy Expenses	1.3%	
Other Operating Expenses	1.1%	
Total Operating Expenses	23.3%	
Net Operating Profit	2.3%	
Non-Operating Income	1.0%	
Non-Operating Expenses	2.1%	
Net Profit Before Tax	1.2%	
Net Profit After Tax	0.3%	
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	23.3%	
Total Operating Expense to Gross Margin	91.9%	
Non-People Expense to Net Sales	6.7%	
Non-People Expense to Gross Margin	24.1%	
INTEREST EXPENSE		
Interest Expense to Net Sales	1.6%	
Times Interest Earned	2.4X	
BALANCE SHEET		
Cash	4.7%	
Accounts & Notes Receivable, Trade(Net)	19.6%	
Inventory	56.9%	
Other Current Assets	13.2%	
Total Current Assets	94.4%	
All Other Assets	5.6%	
Total Assets	100.0%	
Total Current Liabilities	19.3%	
Total Long-Term Liabilities	29.9%	
Total Liabilities	49.2%	
Total Net Worth	50.8%	
Total Liabilities & Net Worth	100.0%	

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES $3,000,000 TO $7,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	8.9%	1.1 - 9.5%
Total Assets to Net Worth	1.5X	1.4 - 3.7X
Net Profit After Tax to Total Assets	5.2%	1.8 - 6.6%
Net Sales to Total Assets	2.4X	2.2 - 2.9X
Net Profit After Tax to Net Sales	1.9%	0.8 - 2.2%
Net Profit Before Tax to Net Worth	12.0%	9.2 - 17.7%
Net Profit Before Tax to Total Assets	5.8%	2.6 - 8.3%
EBIT to Total Assets	8.1%	7.4 - 12.2%
SALES ANALYSIS		
Net Sales($000)	$5,437	$4,727 - 6,591
Percent Sales Change from Prior Year	11.2%	7.1 - 17.2%
Sales Mix:		
Direct Sales	9.2%	8.2 - 11.5%
Warehouse Sales - Counter and Delivery	90.8%	88.5 - 91.8%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	43.0%	38.0 - 48.5%
Heating & Cooling Supplies & Equipment	21.2%	12.0 - 30.0%
Industrial P-V-F (Pipes-Valves-Fittings)	21.5%	15.0 - 25.0%
Other Industrial Supplies & Equipment	10.5%	2.5 - 17.5%
Other Products	3.9%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.5%	22.5 - 30.8%
Gross Margin on Direct Shipments	12.1%	12.0 - 24.9%
Gross Margin on Warehouse Sales	28.3%	23.6 - 32.2%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.13X	2.81 - 3.48X
Total Debt to Net Worth	53.8%	39.3 - 266.8%
Current Debt to Net Worth	49.2%	36.4 - 100.4%
Current Assets to Current Debt	2.72X	1.77 - 3.21X
Current Assets Minus Inventory/Curr Debt	1.05X	0.64 - 1.30X
INVOICE/TRANSACTION DATA		
*Billing Lines Per Invoice	8.0	5.0 - 8.0
Average Invoice Size	$182	$162 - 199
Average Billing Line	$24.92	$21.91 - 36.32

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES $3,000,000 TO $7,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$188,299	$178,058 - 206,710
Gross Margin Per Employee	$50,733	$39,707 - 59,905
Average Compensation Per Employee	$25,092	$22,978 - 27,448
Average Fringe Benefits Per Employee	$4,726	$3,594 - 4,862
Compensation & Fringes Per Employee	$28,354	$28,006 - 30,552
Payroll to Net Sales	13.6%	12.5 - 15.6%
Fringe Benefits to Net Sales	2.0%	1.9 - 2.8%
Payroll & Fringes to Net Sales	16.1%	14.4 - 18.0%
Payroll to Gross Margin	51.4%	49.4 - 57.1%
Fringe Benefits to Gross Margin	9.1%	7.2 - 11.6%
Payroll & Fringes to Gross Margin	62.8%	57.6 - 66.5%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.20X	2.92 - 4.24X
% of Whse Sales from Non-Stock Items	9.5%	3.3 - 17.3%
Cost of In-Stock Whse Sales/Ave Inventory	3.02X	2.52 - 3.90X
No. of Days Average Inventory Carried	114 Days	86 - 125 Days
Total Cost of Goods Sold to Ave Inventory	4.05X	3.24 - 4.55X
Whse Gross Margin Return on Ave Inventory	131%	123 - 182%
Turn & Earn Profitability Index	91%	89 - 125%
Percent of Firms on LIFO	27.3%	
ACCOUNTS RECEIVABLE		
Average Collection Period	49 Days	43 - 53 Days
Gross Margin Return on Receivables	193%	
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	67.5%	63.1 - 73.8%
31-60 Days Outstanding	18.4%	14.6 - 22.5%
61-90 Days Outstanding	7.0%	4.7 - 8.2%
Over 90 Days Outstanding	7.1%	4.0 - 8.3%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,101	$903 - 1,215
31-60 Days Outstanding	$1,297	$891 - 1,649
61-90 Days Outstanding	$1,491	$964 - 1,828
Over 90 Days Outstanding	$1,432	
Total	$1,129	$1,019 - 1,276
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	68.3%	61.9 - 78.1%
31-60 Days Outstanding	17.2%	12.4 - 23.3%
61-90 Days Outstanding	7.1%	4.8 - 10.3%
Over 90 Days Outstanding	7.4%	3.1 - 11.8%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES $3,000,000 TO $7,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	73.5%	69.2 - 77.5%
Gross Margin	26.5%	22.5 - 30.8%
Operating Expenses:		
Selling Expenses	6.7%	5.6 - 7.5%
Delivery Expenses	2.1%	1.3 - 3.1%
Warehouse Expenses	3.0%	1.4 - 2.9%
General & Administrative Expenses	10.5%	9.0 - 12.0%
Occupancy Expenses	1.8%	1.3 - 2.3%
Other Operating Expenses	0.3%	0.0 - 0.0%
Total Operating Expenses	24.4%	22.1 - 26.2%
Net Operating Profit	2.2%	0.5 - 3.3%
Non-Operating Income	2.6%	2.1 - 3.1%
Non-Operating Expenses	2.3%	1.4 - 2.9%
Net Profit Before Tax	2.4%	1.0 - 2.6%
Net Profit After Tax	1.9%	0.8 - 2.2%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	24.4%	22.1 - 26.2%
Total Operating Expense to Gross Margin	92.8%	87.9 - 97.9%
Non-People Expense to Net Sales	8.3%	7.2 - 9.2%
Non-People Expense to Gross Margin	31.3%	28.6 - 32.5%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.7%	0.3 - 1.7%
Times Interest Earned	4.7X	1.9 - 11.6X
BALANCE SHEET		
Cash	4.8%	0.1 - 3.1%
Accounts & Notes Receivable, Trade(Net)	28.3%	22.8 - 32.1%
Inventory	47.5%	45.1 - 52.3%
Other Current Assets	2.8%	0.5 - 4.5%
Total Current Assets	83.4%	77.2 - 89.1%
All Other Assets	16.7%	10.9 - 22.8%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	35.9%	25.0 - 44.6%
Total Long-Term Liabilities	16.7%	1.2 - 26.8%
Total Liabilities	52.6%	30.0 - 77.5%
Total Net Worth	47.4%	22.5 - 70.0%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES OVER $7,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	14.2%	4.2 - 17.0%
Total Assets to Net Worth	2.0X	1.6 - 2.8X
Net Profit After Tax to Total Assets	4.4%	2.3 - 7.7%
Net Sales to Total Assets	2.8X	2.6 - 3.0X
Net Profit After Tax to Net Sales	1.4%	0.8 - 2.9%
Net Profit Before Tax to Net Worth	17.3%	7.8 - 23.7%
Net Profit Before Tax to Total Assets	6.3%	3.4 - 9.0%
EBIT to Total Assets	7.9%	6.7 - 13.3%
SALES ANALYSIS		
Net Sales($000)	$15,061	$10,237 - 27,597
Percent Sales Change from Prior Year	18.8%	12.6 - 26.4%
Sales Mix:		
Direct Sales	10.7%	5.0 - 15.1%
Warehouse Sales - Counter and Delivery	89.3%	84.9 - 95.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	40.9%	36.6 - 47.5%
Heating & Cooling Supplies & Equipment	24.7%	20.0 - 33.5%
Industrial P-V-F (Pipes-Valves-Fittings)	21.2%	16.5 - 24.0%
Other Industrial Supplies & Equipment	3.7%	0.0 - 4.0%
Other Products	9.5%	0.0 - 10.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	23.8%	21.9 - 25.9%
Gross Margin on Direct Shipments	11.1%	9.5 - 13.2%
Gross Margin on Warehouse Sales	24.7%	23.6 - 26.2%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.17X	2.97 - 3.52X
Total Debt to Net Worth	99.9%	58.8 - 183.5%
Current Debt to Net Worth	76.5%	53.7 - 150.3%
Current Assets to Current Debt	2.28X	1.64 - 2.93X
Current Assets Minus Inventory/Curr Debt	1.07X	0.76 - 1.36X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.3	3.9 - 6.0
Average Invoice Size	$188	$137 - 230
Average Billing Line	$34.29	$27.94 - 45.58

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES OVER $7,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$217,394	$199,198 - 247,500
Gross Margin Per Employee	$49,915	$43,663 - 56,647
Average Compensation Per Employee	$24,113	$20,557 - 26,498
Average Fringe Benefits Per Employee	$4,159	$3,326 - 5,439
Compensation & Fringes Per Employee	$28,771	$24,850 - 31,225
Payroll to Net Sales	10.8%	10.2 - 13.7%
Fringe Benefits to Net Sales	2.0%	1.7 - 2.3%
Payroll & Fringes to Net Sales	12.8%	11.7 - 15.5%
Payroll to Gross Margin	49.1%	46.4 - 51.0%
Fringe Benefits to Gross Margin	8.4%	7.3 - 9.4%
Payroll & Fringes to Gross Margin	58.3%	53.2 - 59.9%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.92X	3.77 - 4.26X
% of Whse Sales from Non-Stock Items	14.7%	10.0 - 17.3%
Cost of In-Stock Whse Sales/Ave Inventory	3.30X	3.08 - 3.59X
No. of Days Average Inventory Carried	93 Days	86 - 97 Days
Total Cost of Goods Sold to Ave Inventory	4.45X	4.19 - 5.04X
Whse Gross Margin Return on Ave Inventory	127%	117 - 146%
Turn & Earn Profitability Index	102%	91 - 108%
Percent of Firms on LIFO	76.5%	
ACCOUNTS RECEIVABLE		
Average Collection Period	50 Days	41 - 57 Days
Gross Margin Return on Receivables	174%	142 - 189%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	64.0%	55.8 - 70.6%
31-60 Days Outstanding	20.1%	14.6 - 21.9%
61-90 Days Outstanding	8.3%	5.6 - 10.7%
Over 90 Days Outstanding	7.5%	4.4 - 11.1%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,852	$760 - 2,291
31-60 Days Outstanding	$2,303	$1,481 - 3,023
61-90 Days Outstanding	$2,026	$964 - 2,269
Over 90 Days Outstanding	$1,915	$1,346 - 2,543
Total	$1,797	$943 - 2,480
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	63.5%	49.8 - 78.6%
31-60 Days Outstanding	20.4%	10.2 - 23.3%
61-90 Days Outstanding	8.4%	5.3 - 8.3%
Over 90 Days Outstanding	7.7%	4.6 - 9.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES OVER $7,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	76.2%	74.1 - 78.1%
Gross Margin	23.8%	21.9 - 25.9%
Operating Expenses:		
Selling Expenses	6.2%	5.3 - 7.9%
Delivery Expenses	1.7%	1.5 - 1.8%
Warehouse Expenses	2.3%	1.8 - 2.9%
General & Administrative Expenses	9.0%	6.8 - 10.3%
Occupancy Expenses	1.6%	1.3 - 2.4%
Other Operating Expenses	0.3%	0.0 - 0.0%
Total Operating Expenses	21.1%	18.8 - 23.8%
Net Operating Profit	2.7%	1.1 - 4.1%
Non-Operating Income	1.9%	1.6 - 2.2%
Non-Operating Expenses	1.7%	1.2 - 2.5%
Net Profit Before Tax	2.8%	1.2 - 3.5%
Net Profit After Tax	1.4%	0.8 - 2.9%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	21.1%	18.8 - 23.8%
Total Operating Expense to Gross Margin	89.1%	84.6 - 94.6%
Non-People Expense to Net Sales	7.2%	6.4 - 8.1%
Non-People Expense to Gross Margin	31.4%	26.6 - 36.3%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.5%	0.2 - 1.2%
Times Interest Earned	5.9X	2.5 - 16.9X
BALANCE SHEET		
Cash	3.0%	0.2 - 4.6%
Accounts & Notes Receivable, Trade(Net)	37.4%	32.0 - 38.9%
Inventory	44.8%	40.6 - 53.8%
Other Current Assets	1.4%	0.2 - 2.0%
Total Current Assets	86.5%	86.3 - 91.4%
All Other Assets	13.5%	8.6 - 13.7%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	40.5%	29.8 - 54.8%
Total Long-Term Liabilities	10.9%	2.4 - 12.4%
Total Liabilities	51.4%	37.0 - 64.7%
Total Net Worth	48.6%	35.3 - 63.0%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	11.4%	8.6 - 15.6%
Total Assets to Net Worth	1.5X	1.3 - 2.0X
Net Profit After Tax to Total Assets	7.3%	5.5 - 8.7%
Net Sales to Total Assets	2.6X	2.4 - 3.1X
Net Profit After Tax to Net Sales	2.7%	1.9 - 4.2%
Net Profit Before Tax to Net Worth	16.9%	12.9 - 21.5%
Net Profit Before Tax to Total Assets	8.7%	8.0 - 13.9%
EBIT to Total Assets	11.2%	9.2 - 14.8%
SALES ANALYSIS		
Net Sales($000)	$10,682	$4,727 - 15,252
Percent Sales Change from Prior Year	17.4%	9.4 - 27.1%
Sales Mix:		
Direct Sales	7.6%	4.1 - 10.9%
Warehouse Sales - Counter and Delivery	92.4%	89.1 - 95.9%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	40.6%	36.6 - 50.0%
Heating & Cooling Supplies & Equipment	25.4%	20.0 - 32.5%
Industrial P-V-F (Pipes-Valves-Fittings)	23.6%	17.3 - 35.0%
Other Industrial Supplies & Equipment	4.1%	0.0 - 6.0%
Other Products	6.4%	0.0 - 9.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.3%	22.5 - 30.0%
Gross Margin on Direct Shipments	12.9%	10.3 - 19.7%
Gross Margin on Warehouse Sales	28.6%	24.2 - 32.2%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.16X	2.61 - 3.53X
Total Debt to Net Worth	54.1%	34.0 - 98.7%
Current Debt to Net Worth	49.2%	26.7 - 75.2%
Current Assets to Current Debt	2.68X	2.14 - 4.31X
Current Assets Minus Inventory/Curr Debt	1.17X	0.89 - 2.14X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	8.0	5.0 - 9.0
Average Invoice Size	$184	$147 - 199
Average Billing Line	$26.27	$19.18 - 31.27

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$201,811	$172,901 - 243,959
Gross Margin Per Employee	$51,220	$43,209 - 56,647
Average Compensation Per Employee	$24,227	$21,573 - 26,890
Average Fringe Benefits Per Employee	$3,978	$3,257 - 4,743
Compensation & Fringes Per Employee	$28,354	$25,932 - 30,664
Payroll to Net Sales	13.2%	10.9 - 15.6%
Fringe Benefits to Net Sales	2.0%	1.8 - 2.5%
Payroll & Fringes to Net Sales	15.2%	12.6 - 17.2%
Payroll to Gross Margin	50.9%	46.8 - 52.4%
Fringe Benefits to Gross Margin	8.4%	6.9 - 9.4%
Payroll & Fringes to Gross Margin	58.9%	55.1 - 61.4%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.90X	3.22 - 4.52X
% of Whse Sales from Non-Stock Items	10.0%	7.0 - 15.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.40X	2.69 - 4.02X
No. of Days Average Inventory Carried	94 Days	81 - 115 Days
Total Cost of Goods Sold to Ave Inventory	4.38X	3.28 - 4.97X
Whse Gross Margin Return on Ave Inventory	143%	118 - 192%
Turn & Earn Profitability Index	103%	89 - 151%
Percent of Firms on LIFO	50.0%	
ACCOUNTS RECEIVABLE		
Average Collection Period	48 Days	42 - 55 Days
Gross Margin Return on Receivables	186%	169 - 215%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	63.6%	55.5 - 69.9%
31-60 Days Outstanding	20.6%	15.0 - 23.5%
61-90 Days Outstanding	9.2%	6.0 - 12.5%
Over 90 Days Outstanding	6.7%	3.5 - 7.3%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$874	$608 - 1,881
31-60 Days Outstanding	$1,297	$675 - 2,032
61-90 Days Outstanding	$1,017	$660 - 2,208
Over 90 Days Outstanding	$1,648	$1,109 - 2,371
Total	$1,138	$677 - 1,990
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	60.8%	51.8 - 68.9%
31-60 Days Outstanding	22.5%	15.0 - 27.1%
61-90 Days Outstanding	9.3%	6.3 - 11.4%
Over 90 Days Outstanding	7.5%	4.8 - 9.9%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	73.7%	70.0 - 77.5%
Gross Margin	26.3%	22.5 - 30.0%
Operating Expenses:		
Selling Expenses	6.7%	4.7 - 8.8%
Delivery Expenses	1.9%	1.5 - 2.4%
Warehouse Expenses	3.1%	1.7 - 3.2%
General & Administrative Expenses	8.9%	6.6 - 10.5%
Occupancy Expenses	1.5%	1.0 - 2.2%
Other Operating Expenses	0.3%	0.0 - 0.0%
Total Operating Expenses	22.4%	19.9 - 25.1%
Net Operating Profit	3.9%	2.6 - 4.9%
Non-Operating Income	1.9%	1.4 - 2.5%
Non-Operating Expenses	1.6%	1.1 - 2.0%
Net Profit Before Tax	4.2%	2.6 - 5.1%
Net Profit After Tax	2.7%	1.9 - 4.2%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.4%	19.9 - 25.1%
Total Operating Expense to Gross Margin	85.5%	82.7 - 89.3%
Non-People Expense to Net Sales	7.2%	6.4 - 8.2%
Non-People Expense to Gross Margin	27.8%	23.8 - 31.7%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.4%	0.2 - 0.7%
Times Interest Earned	15.1X	4.9 - 18.6X
BALANCE SHEET		
Cash	5.4%	0.3 - 6.6%
Accounts & Notes Receivable, Trade(Net)	31.1%	23.1 - 35.1%
Inventory	48.2%	40.6 - 55.7%
Other Current Assets	2.6%	0.4 - 5.0%
Total Current Assets	87.2%	86.6 - 91.9%
All Other Assets	12.8%	8.1 - 13.4%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	31.0%	19.6 - 39.5%
Total Long-Term Liabilities	10.8%	1.1 - 11.7%
Total Liabilities	41.8%	26.7 - 52.8%
Total Net Worth	58.2%	47.2 - 73.3%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

HVAC & OTHER EMPHASIS FIRMS

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HVAC & OTHER EMPHASIS FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	10.3%	4.8 - 15.5%
Total Assets to Net Worth	2.1X	1.6 - 2.6X
Net Profit After Tax to Total Assets	4.7%	2.1 - 8.6%
Net Sales to Total Assets	2.4X	2.1 - 2.9X
Net Profit After Tax to Net Sales	2.1%	0.8 - 3.8%
Net Profit Before Tax to Net Worth	14.5%	6.7 - 22.6%
Net Profit Before Tax to Total Assets	7.1%	3.2 - 11.8%
EBIT to Total Assets	9.5%	5.2 - 14.4%
SALES ANALYSIS		
Net Sales($000)	$6,896	$4,062 - 16,410
Percent Sales Change from Prior Year	11.1%	2.7 - 19.2%
Sales Mix:		
Direct Sales	7.5%	2.0 - 11.6%
Warehouse Sales - Counter and Delivery	92.5%	88.4 - 98.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	30.2%	20.0 - 40.0%
Heating & Cooling Supplies & Equipment	25.8%	7.0 - 40.0%
Industrial P-V-F (Pipes-Valves-Fittings)	7.2%	0.0 - 10.0%
Other Industrial Supplies & Equipment	6.7%	0.0 - 10.0%
Other Products	30.2%	7.0 - 48.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.1%	22.8 - 26.8%
Gross Margin on Direct Shipments	13.0%	10.7 - 16.2%
Gross Margin on Warehouse Sales	24.7%	22.6 - 27.1%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.87X	2.43 - 3.44X
Total Debt to Net Worth	106.5%	57.0 - 158.9%
Current Debt to Net Worth	74.0%	41.6 - 117.3%
Current Assets to Current Debt	2.61X	1.81 - 3.53X
Current Assets Minus Inventory/Curr Debt	0.87X	0.71 - 1.38X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	4.0 - 7.0
Average Invoice Size	$161	$103 - 223
Average Billing Line	$32.96	$18.84 - 53.20

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HVAC & OTHER EMPHASIS FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$184,982	$154,357 - 229,703
Gross Margin Per Employee	$43,676	$38,589 - 55,972
Average Compensation Per Employee	$21,446	$18,180 - 26,675
Average Fringe Benefits Per Employee	$3,603	$2,779 - 4,974
Compensation & Fringes Per Employee	$24,867	$20,844 - 31,053
Payroll to Net Sales	11.6%	9.6 - 14.3%
Fringe Benefits to Net Sales	1.9%	1.5 - 2.7%
Payroll & Fringes to Net Sales	12.5%	8.0 - 15.3%
Payroll to Gross Margin	47.9%	42.0 - 54.2%
Fringe Benefits to Gross Margin	8.1%	6.9 - 10.4%
Payroll & Fringes to Gross Margin	52.7%	41.5 - 61.3%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.36X	2.62 - 4.14X
% of Whse Sales from Non-Stock Items	9.0%	4.0 - 15.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.06X	2.22 - 4.18X
No. of Days Average Inventory Carried	109 Days	88 - 139 Days
Total Cost of Goods Sold to Ave Inventory	3.83X	2.88 - 4.79X
Whse Gross Margin Return on Ave Inventory	110%	93 - 142%
Turn & Earn Profitability Index	83%	69 - 98%
Percent of Firms on LIFO	62.1%	
ACCOUNTS RECEIVABLE		
Average Collection Period	45 Days	39 - 52 Days
Gross Margin Return on Receivables	208%	166 - 235%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	70.7%	64.3 - 76.9%
31-60 Days Outstanding	14.7%	10.4 - 18.5%
61-90 Days Outstanding	6.1%	4.1 - 7.6%
Over 90 Days Outstanding	8.5%	4.1 - 11.5%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,284	$929 - 1,769
31-60 Days Outstanding	$1,157	$715 - 1,703
61-90 Days Outstanding	$1,028	$655 - 1,931
Over 90 Days Outstanding	$1,290	$955 - 2,666
Total	$1,239	$835 - 1,699
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	69.3%	63.3 - 79.6%
31-60 Days Outstanding	16.6%	10.3 - 21.0%
61-90 Days Outstanding	6.9%	3.2 - 9.3%
Over 90 Days Outstanding	7.2%	3.8 - 10.3%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HVAC & OTHER EMPHASIS FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.9%	73.2 - 77.2%
Gross Margin	25.1%	22.8 - 26.8%
Operating Expenses:		
Selling Expenses	6.5%	4.7 - 7.2%
Delivery Expenses	1.6%	1.0 - 2.1%
Warehouse Expenses	3.0%	1.8 - 3.7%
General & Administrative Expenses	8.5%	6.9 - 9.7%
Occupancy Expenses	2.0%	1.2 - 2.6%
Other Operating Expenses	0.4%	0.0 - 0.1%
Total Operating Expenses	22.0%	18.9 - 24.1%
Net Operating Profit	3.1%	1.4 - 4.2%
Non-Operating Income	2.0%	1.3 - 2.7%
Non-Operating Expenses	1.7%	1.1 - 2.2%
Net Profit Before Tax	3.4%	1.4 - 5.0%
Net Profit After Tax	2.1%	0.8 - 3.8%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.0%	18.9 - 24.1%
Total Operating Expense to Gross Margin	87.2%	81.9 - 93.3%
Non-People Expense to Net Sales	7.6%	5.7 - 8.5%
Non-People Expense to Gross Margin	30.1%	23.6 - 36.8%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.6 - 1.4%
Times Interest Earned	4.3X	2.2 - 8.9X
BALANCE SHEET		
Cash	4.7%	0.6 - 4.1%
Accounts & Notes Receivable, Trade(Net)	29.2%	24.3 - 34.0%
Inventory	50.9%	45.5 - 59.9%
Other Current Assets	1.8%	0.2 - 1.9%
Total Current Assets	86.6%	81.8 - 92.7%
All Other Assets	13.3%	7.3 - 18.0%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	37.1%	25.6 - 46.6%
Total Long-Term Liabilities	12.8%	2.8 - 16.9%
Total Liabilities	49.9%	36.2 - 60.8%
Total Net Worth	50.1%	39.2 - 63.8%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	8.6%	4.0 - 12.4%
Total Assets to Net Worth	1.6X	1.4 - 1.9X
Net Profit After Tax to Total Assets	5.1%	2.3 - 7.4%
Net Sales to Total Assets	2.6X	2.3 - 2.9X
Net Profit After Tax to Net Sales	1.8%	0.8 - 3.8%
Net Profit Before Tax to Net Worth	13.5%	6.0 - 18.0%
Net Profit Before Tax to Total Assets	7.1%	3.7 - 11.5%
EBIT to Total Assets	10.7%	4.4 - 13.2%
SALES ANALYSIS		
Net Sales($000)	$2,062	$1,388 - 2,601
Percent Sales Change from Prior Year	3.5%	-2.6 - 7.9%
Sales Mix:		
Direct Sales	7.4%	
Warehouse Sales - Counter and Delivery	92.7%	
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	28.8%	8.8 - 47.5%
Heating & Cooling Supplies & Equipment	19.6%	0.0 - 36.5%
Industrial P-V-F (Pipes-Valves-Fittings)	6.1%	0.0 - 5.0%
Other Industrial Supplies & Equipment	5.5%	0.0 - 3.8%
Other Products	40.0%	3.8 - 53.8%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	28.7%	24.9 - 30.0%
Gross Margin on Direct Shipments	20.7%	
Gross Margin on Warehouse Sales	30.1%	
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.88X	2.58 - 3.38X
Total Debt to Net Worth	55.7%	43.5 - 92.7%
Current Debt to Net Worth	54.0%	37.9 - 77.5%
Current Assets to Current Debt	3.00X	2.69 - 3.38X
Current Assets Minus Inventory/Curr Debt	0.96X	0.81 - 1.54X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.0	
Average Invoice Size	$89	
Average Billing Line	$28.13	

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$155,114	$144,756 - 178,168
Gross Margin Per Employee	$43,556	$41,438 - 60,469
Average Compensation Per Employee	$21,970	$18,776 - 23,781
Average Fringe Benefits Per Employee	$3,777	$3,510 - 4,731
Compensation & Fringes Per Employee	$25,480	$22,250 - 27,429
Payroll to Net Sales	13.6%	10.7 - 15.6%
Fringe Benefits to Net Sales	2.6%	1.8 - 3.2%
Payroll & Fringes to Net Sales	14.3%	8.8 - 18.8%
Payroll to Gross Margin	43.4%	39.9 - 51.7%
Fringe Benefits to Gross Margin	8.3%	5.8 - 9.1%
Payroll & Fringes to Gross Margin	51.3%	34.7 - 60.4%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	2.64X	
% of Whse Sales from Non-Stock Items	18.0%	
Cost of In-Stock Whse Sales/Ave Inventory	2.56X	
No. of Days Average Inventory Carried	138 Days	
Total Cost of Goods Sold to Ave Inventory	2.99X	2.74 - 4.08X
Whse Gross Margin Return on Ave Inventory	109%	
Turn & Earn Profitability Index	78%	
Percent of Firms on LIFO	77.8%	
ACCOUNTS RECEIVABLE		
Average Collection Period	43 Days	35 - 54 Days
Gross Margin Return on Receivables	233%	213 - 350%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	69.4%	
31-60 Days Outstanding	14.2%	
61-90 Days Outstanding	7.4%	
Over 90 Days Outstanding	9.0%	
Total	100.0%	
Average Account Balance:		
Current (0-30 Days Outstanding)	$997	
31-60 Days Outstanding	$947	
61-90 Days Outstanding	$825	
Over 90 Days Outstanding	$980	
Total	$989	
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	62.7%	
31-60 Days Outstanding	19.7%	
61-90 Days Outstanding	8.4%	
Over 90 Days Outstanding	9.2%	
Total	100.0%	

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES UNDER $3,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	71.3%	70.0 - 75.2%
Gross Margin	28.7%	24.9 - 30.0%
Operating Expenses:		
Selling Expenses	8.4%	5.8 - 10.8%
Delivery Expenses	2.2%	0.5 - 3.4%
Warehouse Expenses	2.6%	0.4 - 4.5%
General & Administrative Expenses	8.7%	7.4 - 9.7%
Occupancy Expenses	2.6%	1.4 - 2.9%
Other Operating Expenses	1.6%	0.0 - 3.0%
Total Operating Expenses	26.0%	21.4 - 27.6%
Net Operating Profit	2.7%	0.6 - 3.9%
Non-Operating Income	2.1%	1.4 - 2.8%
Non-Operating Expenses	1.5%	0.7 - 1.8%
Net Profit Before Tax	3.2%	1.0 - 4.4%
Net Profit After Tax	1.8%	0.8 - 3.8%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	26.0%	21.4 - 27.6%
Total Operating Expense to Gross Margin	89.1%	84.1 - 97.3%
Non-People Expense to Net Sales	9.0%	6.1 - 12.2%
Non-People Expense to Gross Margin	28.8%	22.1 - 39.7%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.4 - 1.3%
Times Interest Earned	8.9X	1.8 - 15.3X
BALANCE SHEET		
Cash	4.3%	1.4 - 7.6%
Accounts & Notes Receivable, Trade(Net)	29.1%	22.6 - 33.4%
Inventory	56.4%	51.0 - 64.9%
Other Current Assets	0.7%	0.0 - 1.3%
Total Current Assets	90.5%	88.3 - 93.9%
All Other Assets	9.5%	6.1 - 11.7%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	30.3%	26.0 - 34.0%
Total Long-Term Liabilities	11.9%	3.0 - 14.3%
Total Liabilities	42.2%	30.2 - 48.1%
Total Net Worth	57.8%	51.9 - 69.8%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES $3,000,000 TO $8,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	8.4%	4.8 - 17.1%
Total Assets to Net Worth	2.2X	1.7 - 3.1X
Net Profit After Tax to Total Assets	4.7%	1.7 - 9.3%
Net Sales to Total Assets	2.5X	2.2 - 3.1X
Net Profit After Tax to Net Sales	1.9%	0.7 - 3.6%
Net Profit Before Tax to Net Worth	12.1%	6.4 - 22.1%
Net Profit Before Tax to Total Assets	5.3%	2.3 - 10.8%
EBIT to Total Assets	6.7%	4.7 - 11.4%
SALES ANALYSIS		
Net Sales($000)	$5,086	$4,152 - 6,273
Percent Sales Change from Prior Year	11.4%	1.0 - 17.7%
Sales Mix:		
Direct Sales	4.9%	1.4 - 5.4%
Warehouse Sales - Counter and Delivery	95.1%	94.6 - 98.6%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	28.3%	19.8 - 38.8%
Heating & Cooling Supplies & Equipment	25.3%	5.5 - 39.0%
Industrial P-V-F (Pipes-Valves-Fittings)	10.1%	0.0 - 15.0%
Other Industrial Supplies & Equipment	8.3%	0.0 - 11.5%
Other Products	28.0%	9.3 - 46.5%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.1%	22.7 - 25.5%
Gross Margin on Direct Shipments	13.2%	11.2 - 17.2%
Gross Margin on Warehouse Sales	23.8%	23.0 - 26.4%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.87X	2.36 - 3.65X
Total Debt to Net Worth	118.8%	68.0 - 208.6%
Current Debt to Net Worth	86.7%	38.2 - 127.9%
Current Assets to Current Debt	2.49X	1.84 - 3.64X
Current Assets Minus Inventory/Curr Debt	0.92X	0.72 - 1.56X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	4.8 - 6.0
Average Invoice Size	$113	$78 - 197
Average Billing Line	$28.49	$14.88 - 35.33

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES $3,000,000 TO $8,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$170,095	$137,852 - 202,415
Gross Margin Per Employee	$39,162	$36,670 - 47,690
Average Compensation Per Employee	$21,167	$18,171 - 24,899
Average Fringe Benefits Per Employee	$3,243	$3,024 - 5,035
Compensation & Fringes Per Employee	$24,658	$20,722 - 28,129
Payroll to Net Sales	11.9%	10.5 - 14.8%
Fringe Benefits to Net Sales	2.0%	1.7 - 2.8%
Payroll & Fringes to Net Sales	12.5%	0.0 - 14.7%
Payroll to Gross Margin	51.2%	44.0 - 58.4%
Fringe Benefits to Gross Margin	8.3%	7.2 - 10.5%
Payroll & Fringes to Gross Margin	52.7%	0.0 - 62.1%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.36X	2.53 - 4.41X
% of Whse Sales from Non-Stock Items	10.0%	3.9 - 15.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.19X	2.19 - 4.53X
No. of Days Average Inventory Carried	109 Days	84 - 145 Days
Total Cost of Goods Sold to Ave Inventory	3.69X	2.73 - 4.85X
Whse Gross Margin Return on Ave Inventory	126%	89 - 160%
Turn & Earn Profitability Index	85%	66 - 98%
Percent of Firms on LIFO	59.1%	
ACCOUNTS RECEIVABLE		
Average Collection Period	42 Days	38 - 47 Days
Gross Margin Return on Receivables	220%	180 - 239%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	73.3%	69.4 - 78.7%
31-60 Days Outstanding	13.9%	10.3 - 18.5%
61-90 Days Outstanding	5.3%	3.7 - 7.1%
Over 90 Days Outstanding	7.6%	3.4 - 9.0%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$934	$769 - 1,423
31-60 Days Outstanding	$1,157	$485 - 1,431
61-90 Days Outstanding	$760	$444 - 1,130
Over 90 Days Outstanding	$1,062	$805 - 1,555
Total	$1,003	$705 - 1,332
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	71.8%	63.7 - 84.9%
31-60 Days Outstanding	14.9%	9.0 - 21.0%
61-90 Days Outstanding	6.7%	3.2 - 8.7%
Over 90 Days Outstanding	6.6%	3.0 - 9.2%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES $3,000,000 TO $8,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.9%	74.5 - 77.3%
Gross Margin	24.1%	22.7 - 25.5%
Operating Expenses:		
Selling Expenses	6.5%	5.1 - 7.3%
Delivery Expenses	1.5%	0.8 - 2.1%
Warehouse Expenses	3.1%	1.9 - 3.7%
General & Administrative Expenses	8.3%	6.8 - 9.6%
Occupancy Expenses	2.0%	1.0 - 2.5%
Other Operating Expenses	0.2%	0.0 - 0.1%
Total Operating Expenses	21.6%	18.9 - 24.0%
Net Operating Profit	2.6%	1.1 - 4.0%
Non-Operating Income	2.1%	1.5 - 2.5%
Non-Operating Expenses	1.8%	1.1 - 2.5%
Net Profit Before Tax	2.8%	1.4 - 4.3%
Net Profit After Tax	1.9%	0.7 - 3.6%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	21.6%	18.9 - 24.0%
Total Operating Expense to Gross Margin	89.2%	82.2 - 95.7%
Non-People Expense to Net Sales	7.5%	5.6 - 9.0%
Non-People Expense to Gross Margin	31.5%	23.8 - 36.8%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.8%	0.4 - 1.5%
Times Interest Earned	4.2X	1.7 - 8.3X
BALANCE SHEET		
Cash	5.2%	0.6 - 4.7%
Accounts & Notes Receivable, Trade(Net)	29.3%	25.0 - 32.9%
Inventory	51.2%	46.0 - 60.3%
Other Current Assets	2.3%	0.2 - 1.9%
Total Current Assets	88.0%	83.9 - 92.8%
All Other Assets	11.6%	7.2 - 15.6%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	38.6%	25.5 - 49.6%
Total Long-Term Liabilities	13.8%	1.6 - 16.8%
Total Liabilities	52.4%	39.3 - 65.2%
Total Net Worth	47.6%	34.8 - 60.7%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES OVER $8,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	10.5%	5.1 - 15.4%
Total Assets to Net Worth	2.1X	1.6 - 2.4X
Net Profit After Tax to Total Assets	4.6%	2.8 - 8.4%
Net Sales to Total Assets	2.2X	2.0 - 2.7X
Net Profit After Tax to Net Sales	2.3%	1.0 - 3.9%
Net Profit Before Tax to Net Worth	17.5%	7.8 - 23.6%
Net Profit Before Tax to Total Assets	7.6%	4.2 - 12.5%
EBIT to Total Assets	10.3%	6.1 - 14.7%
SALES ANALYSIS		
Net Sales($000)	$22,248	$12,934 - 42,687
Percent Sales Change from Prior Year	12.2%	8.4 - 19.9%
Sales Mix:		
Direct Sales	9.6%	5.5 - 12.0%
Warehouse Sales - Counter and Delivery	90.4%	88.1 - 94.5%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	32.6%	20.0 - 42.0%
Heating & Cooling Supplies & Equipment	28.4%	10.0 - 42.0%
Industrial P-V-F (Pipes-Valves-Fittings)	4.6%	0.0 - 8.0%
Other Industrial Supplies & Equipment	5.5%	0.0 - 10.0%
Other Products	29.0%	7.0 - 45.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.7%	22.7 - 26.5%
Gross Margin on Direct Shipments	12.6%	10.3 - 15.2%
Gross Margin on Warehouse Sales	24.7%	22.0 - 26.2%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.77X	2.43 - 3.27X
Total Debt to Net Worth	110.0%	62.6 - 152.9%
Current Debt to Net Worth	80.9%	45.9 - 134.4%
Current Assets to Current Debt	2.03X	1.74 - 2.87X
Current Assets Minus Inventory/Curr Debt	0.86X	0.67 - 1.19X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.8	3.9 - 7.8
Average Invoice Size	$192	$158 - 225
Average Billing Line	$37.50	$29.12 - 56.54

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES OVER $8,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$202,256	$178,037 - 264,568
Gross Margin Per Employee	$49,663	$40,114 - 57,850
Average Compensation Per Employee	$21,384	$18,832 - 27,339
Average Fringe Benefits Per Employee	$3,822	$2,498 - 5,048
Compensation & Fringes Per Employee	$24,922	$20,538 - 31,858
Payroll to Net Sales	11.0%	9.1 - 13.1%
Fringe Benefits to Net Sales	1.7%	1.4 - 2.4%
Payroll & Fringes to Net Sales	12.2%	10.5 - 14.9%
Payroll to Gross Margin	48.5%	41.8 - 52.4%
Fringe Benefits to Gross Margin	7.4%	6.5 - 10.2%
Payroll & Fringes to Gross Margin	55.0%	47.6 - 60.2%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.49X	2.95 - 4.19X
% of Whse Sales from Non-Stock Items	7.0%	4.0 - 11.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.11X	2.86 - 4.06X
No. of Days Average Inventory Carried	104 Days	87 - 124 Days
Total Cost of Goods Sold to Ave Inventory	4.20X	3.26 - 4.85X
Whse Gross Margin Return on Ave Inventory	110%	95 - 123%
Turn & Earn Profitability Index	82%	72 - 98%
Percent of Firms on LIFO	59.3%	
ACCOUNTS RECEIVABLE		
Average Collection Period	48 Days	42 - 52 Days
Gross Margin Return on Receivables	177%	163 - 212%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	69.0%	64.0 - 74.2%
31-60 Days Outstanding	15.5%	10.4 - 20.2%
61-90 Days Outstanding	6.5%	4.9 - 8.2%
Over 90 Days Outstanding	9.1%	5.3 - 11.5%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,821	$1,250 - 2,316
31-60 Days Outstanding	$1,679	$1,027 - 2,364
61-90 Days Outstanding	$1,713	$1,268 - 2,704
Over 90 Days Outstanding	$1,730	$1,126 - 3,332
Total	$1,867	$1,397 - 2,085
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	69.0%	65.3 - 76.9%
31-60 Days Outstanding	17.4%	12.0 - 18.7%
61-90 Days Outstanding	6.6%	2.9 - 8.5%
Over 90 Days Outstanding	7.1%	3.9 - 9.3%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES OVER $8,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.3%	73.5 - 77.3%
Gross Margin	24.7%	22.7 - 26.5%
Operating Expenses:		
Selling Expenses	5.7%	4.6 - 6.9%
Delivery Expenses	1.5%	1.2 - 1.9%
Warehouse Expenses	3.0%	2.0 - 3.9%
General & Administrative Expenses	8.5%	7.0 - 10.8%
Occupancy Expenses	1.9%	1.3 - 2.1%
Other Operating Expenses	0.2%	0.0 - 0.0%
Total Operating Expenses	20.8%	18.7 - 22.3%
Net Operating Profit	3.9%	2.6 - 4.6%
Non-Operating Income	2.0%	1.2 - 2.6%
Non-Operating Expenses	1.7%	1.2 - 2.1%
Net Profit Before Tax	4.1%	2.1 - 5.7%
Net Profit After Tax	2.3%	1.0 - 3.9%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	20.8%	18.7 - 22.3%
Total Operating Expense to Gross Margin	84.5%	81.9 - 89.6%
Non-People Expense to Net Sales	7.1%	5.8 - 8.1%
Non-People Expense to Gross Margin	29.4%	24.7 - 35.1%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.7 - 1.5%
Times Interest Earned	4.1X	2.4 - 10.8X
BALANCE SHEET		
Cash	4.3%	0.4 - 2.9%
Accounts & Notes Receivable, Trade(Net)	29.1%	24.2 - 35.0%
Inventory	48.5%	44.1 - 52.7%
Other Current Assets	1.7%	0.4 - 2.2%
Total Current Assets	83.7%	77.8 - 88.6%
All Other Assets	16.3%	11.4 - 22.2%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	38.2%	26.0 - 49.6%
Total Long-Term Liabilities	12.2%	6.3 - 17.2%
Total Liabilities	50.4%	38.5 - 58.1%
Total Net Worth	49.6%	41.9 - 61.6%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HIGH PROFIT HVAC & OTHER FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	15.7%	10.9 - 22.4%
Total Assets to Net Worth	2.1X	1.5 - 2.4X
Net Profit After Tax to Total Assets	8.7%	6.2 - 10.8%
Net Sales to Total Assets	2.3X	2.1 - 3.0X
Net Profit After Tax to Net Sales	3.8%	2.5 - 4.4%
Net Profit Before Tax to Net Worth	22.2%	17.7 - 35.9%
Net Profit Before Tax to Total Assets	11.8%	9.1 - 16.4%
EBIT to Total Assets	14.5%	11.4 - 18.6%
SALES ANALYSIS		
Net Sales($000)	$7,176	$4,197 - 17,870
Percent Sales Change from Prior Year	15.0%	9.6 - 24.0%
Sales Mix:		
Direct Sales	6.8%	1.4 - 11.7%
Warehouse Sales - Counter and Delivery	93.2%	88.3 - 98.6%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	30.0%	20.0 - 40.0%
Heating & Cooling Supplies & Equipment	25.7%	4.0 - 43.5%
Industrial P-V-F (Pipes-Valves-Fittings)	6.7%	0.0 - 10.0%
Other Industrial Supplies & Equipment	4.9%	0.0 - 7.5%
Other Products	32.7%	4.5 - 50.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.0%	22.8 - 26.8%
Gross Margin on Direct Shipments	13.7%	10.2 - 22.9%
Gross Margin on Warehouse Sales	24.9%	23.2 - 28.9%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.87X	2.43 - 3.52X
Total Debt to Net Worth	105.2%	48.6 - 139.1%
Current Debt to Net Worth	65.1%	40.8 - 114.5%
Current Assets to Current Debt	2.58X	1.75 - 3.40X
Current Assets Minus Inventory/Curr Debt	0.91X	0.73 - 1.46X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.4	3.6 - 7.0
Average Invoice Size	$163	$104 - 216
Average Billing Line	$35.18	$18.26 - 58.02

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HIGH PROFIT HVAC & OTHER FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$212,785	$170,824 - 287,568
Gross Margin Per Employee	$52,898	$42,545 - 69,250
Average Compensation Per Employee	$22,257	$19,041 - 28,577
Average Fringe Benefits Per Employee	$3,505	$2,954 - 6,024
Compensation & Fringes Per Employee	$25,173	$21,185 - 32,638
Payroll to Net Sales	10.3%	9.0 - 13.4%
Fringe Benefits to Net Sales	1.7%	1.2 - 2.5%
Payroll & Fringes to Net Sales	11.3%	7.4 - 13.5%
Payroll to Gross Margin	42.5%	39.9 - 48.0%
Fringe Benefits to Gross Margin	7.3%	5.5 - 8.7%
Payroll & Fringes to Gross Margin	47.8%	33.1 - 55.1%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.54X	2.66 - 5.12X
% of Whse Sales from Non-Stock Items	5.0%	2.8 - 12.8%
Cost of In-Stock Whse Sales/Ave Inventory	3.57X	2.88 - 4.87X
No. of Days Average Inventory Carried	103 Days	71 - 137 Days
Total Cost of Goods Sold to Ave Inventory	4.00X	2.99 - 5.35X
Whse Gross Margin Return on Ave Inventory	123%	101 - 151%
Turn & Earn Profitability Index	87%	77 - 100%
Percent of Firms on LIFO	51.7%	
ACCOUNTS RECEIVABLE		
Average Collection Period	46 Days	38 - 54 Days
Gross Margin Return on Receivables	215%	162 - 238%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	72.1%	65.0 - 78.6%
31-60 Days Outstanding	15.4%	10.4 - 18.7%
61-90 Days Outstanding	5.8%	4.0 - 7.2%
Over 90 Days Outstanding	6.7%	3.5 - 9.4%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,340	$952 - 1,847
31-60 Days Outstanding	$1,207	$899 - 2,087
61-90 Days Outstanding	$1,041	$675 - 2,321
Over 90 Days Outstanding	$1,210	$975 - 1,667
Total	$1,328	$983 - 1,968
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	71.8%	65.4 - 79.6%
31-60 Days Outstanding	15.8%	11.4 - 19.1%
61-90 Days Outstanding	5.9%	2.4 - 8.3%
Over 90 Days Outstanding	6.4%	3.6 - 9.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

HIGH PROFIT HVAC & OTHER FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.0%	73.2 - 77.2%
Gross Margin	25.0%	22.8 - 26.8%
Operating Expenses:		
Selling Expenses	6.3%	4.7 - 7.0%
Delivery Expenses	1.2%	0.7 - 1.6%
Warehouse Expenses	2.7%	1.7 - 3.2%
General & Administrative Expenses	7.5%	5.5 - 8.9%
Occupancy Expenses	2.2%	1.2 - 2.7%
Other Operating Expenses	0.4%	0.0 - 0.2%
Total Operating Expenses	20.3%	18.2 - 21.7%
Net Operating Profit	4.8%	3.4 - 4.9%
Non-Operating Income	2.3%	1.6 - 3.0%
Non-Operating Expenses	1.5%	0.8 - 1.9%
Net Profit Before Tax	5.6%	3.8 - 6.5%
Net Profit After Tax	3.8%	2.5 - 4.4%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	20.3%	18.2 - 21.7%
Total Operating Expense to Gross Margin	80.8%	78.4 - 85.8%
Non-People Expense to Net Sales	6.3%	5.4 - 7.9%
Non-People Expense to Gross Margin	25.6%	21.2 - 33.4%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.7%	0.6 - 1.2%
Times Interest Earned	8.6X	4.8 - 12.0X
BALANCE SHEET		
Cash	6.6%	0.7 - 4.4%
Accounts & Notes Receivable, Trade(Net)	29.5%	24.7 - 35.3%
Inventory	47.7%	41.3 - 55.1%
Other Current Assets	2.3%	0.1 - 2.0%
Total Current Assets	86.1%	81.6 - 93.0%
All Other Assets	13.9%	7.0 - 18.4%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	37.8%	25.5 - 50.5%
Total Long-Term Liabilities	9.5%	1.9 - 14.1%
Total Liabilities	47.2%	32.7 - 58.2%
Total Net Worth	52.8%	41.8 - 67.3%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

ALL REPORTING FIRMS

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

ALL FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	9.8%	4.3 - 17.3%
Total Assets to Net Worth	2.0X	1.5 - 3.0X
Net Profit After Tax to Total Assets	4.5%	2.0 - 8.0%
Net Sales to Total Assets	2.6X	2.2 - 3.0X
Net Profit After Tax to Net Sales	1.7%	0.7 - 3.3%
Net Profit Before Tax to Net Worth	14.0%	6.6 - 24.0%
Net Profit Before Tax to Total Assets	6.0%	2.7 - 11.8%
EBIT to Total Assets	8.6%	5.5 - 13.7%
SALES ANALYSIS		
Net Sales($000)	$6,935	$3,556 - 14,403
Percent Sales Change from Prior Year	11.0%	2.5 - 19.2%
Sales Mix:		
Direct Sales	8.8%	3.0 - 12.1%
Warehouse Sales - Counter and Delivery	91.2%	87.9 - 97.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	54.9%	33.0 - 82.8%
Heating & Cooling Supplies & Equipment	14.7%	0.0 - 26.0%
Industrial P-V-F (Pipes-Valves-Fittings)	17.9%	0.0 - 20.0%
Other Industrial Supplies & Equipment	3.4%	0.0 - 4.4%
Other Products	9.1%	0.0 - 10.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.1%	22.2 - 27.2%
Gross Margin on Direct Shipments	12.0%	9.6 - 16.0%
Gross Margin on Warehouse Sales	25.6%	23.1 - 28.6%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.93X	2.56 - 3.51X
Total Debt to Net Worth	104.6%	54.0 - 203.8%
Current Debt to Net Worth	78.0%	41.7 - 144.9%
Current Assets to Current Debt	2.34X	1.71 - 3.32X
Current Assets Minus Inventory/Curr Debt	0.97X	0.74 - 1.44X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.3	4.3 - 8.0
Average Invoice Size	$182	$113 - 245
Average Billing Line	$30.90	$19.07 - 48.94

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

ALL FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$200,712	$170,095 - 246,627
Gross Margin Per Employee	$48,882	$41,956 - 58,072
Average Compensation Per Employee	$24,123	$20,533 - 27,896
Average Fringe Benefits Per Employee	$4,009	$3,118 - 5,404
Compensation & Fringes Per Employee	$27,914	$23,592 - 32,889
Payroll to Net Sales	11.8%	10.2 - 14.2%
Fringe Benefits to Net Sales	2.1%	1.6 - 2.6%
Payroll & Fringes to Net Sales	13.0%	9.9 - 15.7%
Payroll to Gross Margin	49.1%	43.9 - 53.2%
Fringe Benefits to Gross Margin	8.4%	6.8 - 10.5%
Payroll & Fringes to Gross Margin	54.6%	43.0 - 61.3%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.58X	3.07 - 4.60X
% of Whse Sales from Non-Stock Items	10.0%	5.0 - 18.1%
Cost of In-Stock Whse Sales/Ave Inventory	3.17X	2.61 - 3.95X
No. of Days Average Inventory Carried	102 Days	79 - 119 Days
Total Cost of Goods Sold to Ave Inventory	4.18X	3.30 - 5.32X
Whse Gross Margin Return on Ave Inventory	128%	104 - 155%
Turn & Earn Profitability Index	93%	75 - 114%
Percent of Firms on LIFO	52.5%	
ACCOUNTS RECEIVABLE		
Average Collection Period	48 Days	42 - 57 Days
Gross Margin Return on Receivables	182%	151 - 227%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	66.4%	58.2 - 74.2%
31-60 Days Outstanding	17.5%	12.9 - 21.9%
61-90 Days Outstanding	7.2%	4.8 - 9.1%
Over 90 Days Outstanding	8.9%	4.0 - 12.6%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,393	$897 - 2,152
31-60 Days Outstanding	$1,387	$886 - 2,305
61-90 Days Outstanding	$1,391	$782 - 2,474
Over 90 Days Outstanding	$1,640	$879 - 3,229
Total	$1,441	$967 - 2,093
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	68.0%	58.3 - 79.3%
31-60 Days Outstanding	17.4%	12.0 - 22.1%
61-90 Days Outstanding	7.1%	4.0 - 9.3%
Over 90 Days Outstanding	7.5%	3.2 - 10.7%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

ALL FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.9%	72.8 - 77.8%
Gross Margin	25.1%	22.2 - 27.2%
Operating Expenses:		
Selling Expenses	6.4%	4.7 - 7.8%
Delivery Expenses	1.9%	1.2 - 2.4%
Warehouse Expenses	2.9%	1.7 - 3.4%
General & Administrative Expenses	9.0%	6.8 - 10.6%
Occupancy Expenses	2.1%	1.2 - 2.7%
Other Operating Expenses	0.4%	0.0 - 0.1%
Total Operating Expenses	22.7%	19.4 - 24.9%
Net Operating Profit	2.5%	0.8 - 4.0%
Non-Operating Income	1.9%	1.1 - 2.6%
Non-Operating Expenses	1.9%	1.1 - 2.5%
Net Profit Before Tax	2.4%	1.0 - 4.2%
Net Profit After Tax	1.7%	0.7 - 3.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.7%	19.4 - 24.9%
Total Operating Expense to Gross Margin	90.6%	84.3 - 96.9%
Non-People Expense to Net Sales	8.1%	6.3 - 8.9%
Non-People Expense to Gross Margin	32.4%	26.6 - 36.8%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.8%	0.4 - 1.5%
Times Interest Earned	3.9X	2.0 - 8.9X
BALANCE SHEET		
Cash	4.4%	0.5 - 4.6%
Accounts & Notes Receivable, Trade(Net)	32.3%	26.0 - 37.8%
Inventory	48.5%	41.8 - 56.3%
Other Current Assets	1.9%	0.2 - 1.9%
Total Current Assets	87.1%	82.7 - 93.2%
All Other Assets	12.9%	6.8 - 17.3%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	39.4%	25.6 - 51.6%
Total Long-Term Liabilities	12.9%	1.6 - 18.8%
Total Liabilities	52.4%	35.2 - 67.8%
Total Net Worth	47.7%	32.2 - 64.8%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

LARGE VOLUME FIRMS
(Those with Sales Volume of $50 Million & Over)

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

ALL FIRMS WITH SALES VOLUME OF $50 MILLION & OVER

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	11.1%	6.7 - 15.0%
Total Assets to Net Worth	2.7X	1.9 - 4.7X
Net Profit After Tax to Total Assets	3.3%	2.1 - 5.1%
Net Sales to Total Assets	2.4X	2.2 - 2.7X
Net Profit After Tax to Net Sales	1.3%	0.9 - 2.2%
Net Profit Before Tax to Net Worth	16.3%	7.9 - 22.6%
Net Profit Before Tax to Total Assets	4.7%	2.2 - 8.7%
EBIT to Total Assets	7.7%	5.3 - 9.7%
SALES ANALYSIS		
Net Sales($000)	$107,750	$60,631 - 190,589
Percent Sales Change from Prior Year	20.3%	8.3 - 24.0%
Sales Mix:		
Direct Sales	16.9%	12.4 - 20.3%
Warehouse Sales - Counter and Delivery	83.1%	79.7 - 87.6%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	44.8%	29.0 - 59.0%
Heating & Cooling Supplies & Equipment	18.8%	0.0 - 32.3%
Industrial P-V-F (Pipes-Valves-Fittings)	19.2%	0.0 - 20.0%
Other Industrial Supplies & Equipment	3.8%	0.0 - 5.5%
Other Products	13.4%	0.0 - 15.3%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	21.4%	19.1 - 23.3%
Gross Margin on Direct Shipments	10.3%	9.6 - 12.4%
Gross Margin on Warehouse Sales	21.2%	20.4 - 24.1%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.06X	2.73 - 3.38X
Total Debt to Net Worth	164.9%	93.0 - 368.5%
Current Debt to Net Worth	91.0%	56.2 - 306.8%
Current Assets to Current Debt	2.19X	1.39 - 2.93X
Current Assets Minus Inventory/Curr Debt	1.02X	0.61 - 1.31X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.4	3.8 - 5.0
Average Invoice Size	$279	$226 - 352
Average Billing Line	$62.43	$43.22 - 83.05

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

ALL FIRMS WITH SALES VOLUME OF $50 MILLION & OVER

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$235,711	$213,920 - 272,781
Gross Margin Per Employee	$46,998	$42,812 - 55,182
Average Compensation Per Employee	$23,326	$19,886 - 26,892
Average Fringe Benefits Per Employee	$4,561	$3,252 - 4,681
Compensation & Fringes Per Employee	$28,520	$24,041 - 30,971
Payroll to Net Sales	9.6%	8.7 - 10.6%
Fringe Benefits to Net Sales	1.7%	1.5 - 1.9%
Payroll & Fringes to Net Sales	11.2%	9.4 - 12.4%
Payroll to Gross Margin	48.2%	45.1 - 50.0%
Fringe Benefits to Gross Margin	8.5%	7.3 - 9.7%
Payroll & Fringes to Gross Margin	54.9%	49.1 - 59.0%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.91X	3.37 - 4.36X
% of Whse Sales from Non-Stock Items	12.2%	9.0 - 15.8%
Cost of In-Stock Whse Sales/Ave Inventory	3.25X	2.86 - 4.21X
No. of Days Average Inventory Carried	93 Days	84 - 108 Days
Total Cost of Goods Sold to Ave Inventory	4.84X	4.57 - 5.08X
Whse Gross Margin Return on Ave Inventory	118%	94 - 133%
Turn & Earn Profitability Index	89%	70 - 100%
Percent of Firms on LIFO	57.1%	
ACCOUNTS RECEIVABLE		
Average Collection Period	52 Days	50 - 54 Days
Gross Margin Return on Receivables	142%	125 - 163%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	62.1%	57.4 - 68.2%
31-60 Days Outstanding	18.5%	16.1 - 21.2%
61-90 Days Outstanding	7.5%	6.4 - 8.8%
Over 90 Days Outstanding	12.0%	7.5 - 16.9%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$2,710	$2,183 - 4,405
31-60 Days Outstanding	$4,128	$2,256 - 5,269
61-90 Days Outstanding	$4,213	$2,946 - 5,984
Over 90 Days Outstanding	$4,387	$3,424 - 5,763
Total	$3,290	$2,184 - 4,533
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	68.1%	58.0 - 73.6%
31-60 Days Outstanding	17.1%	14.9 - 21.1%
61-90 Days Outstanding	6.9%	4.3 - 9.0%
Over 90 Days Outstanding	8.0%	4.9 - 8.8%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

ALL FIRMS WITH SALES VOLUME OF $50 MILLION & OVER

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	78.6%	76.7 - 80.9%
Gross Margin	21.4%	19.1 - 23.3%
Operating Expenses:		
Selling Expenses	5.2%	4.3 - 5.4%
Delivery Expenses	1.6%	1.3 - 1.7%
Warehouse Expenses	3.0%	2.5 - 4.0%
General & Administrative Expenses	7.2%	6.5 - 8.3%
Occupancy Expenses	2.0%	1.3 - 2.7%
Other Operating Expenses	0.2%	0.0 - 0.0%
Total Operating Expenses	19.2%	18.0 - 19.9%
Net Operating Profit	2.2%	1.6 - 3.3%
Non-Operating Income	1.5%	0.5 - 1.9%
Non-Operating Expenses	2.0%	1.3 - 2.7%
Net Profit Before Tax	1.7%	1.0 - 3.0%
Net Profit After Tax	1.3%	0.9 - 2.2%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	19.2%	18.0 - 19.9%
Total Operating Expense to Gross Margin	90.6%	85.4 - 92.0%
Non-People Expense to Net Sales	7.3%	6.4 - 7.7%
Non-People Expense to Gross Margin	35.0%	31.0 - 35.1%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.0%	0.9 - 1.2%
Times Interest Earned	3.5X	2.0 - 6.5X
BALANCE SHEET		
Cash	0.9%	0.1 - 1.4%
Accounts & Notes Receivable, Trade(Net)	34.4%	30.0 - 36.6%
Inventory	46.1%	41.6 - 48.8%
Other Current Assets	1.6%	0.7 - 2.4%
Total Current Assets	83.0%	75.9 - 92.4%
All Other Assets	17.0%	7.6 - 24.1%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	42.5%	25.7 - 63.1%
Total Long-Term Liabilities	17.5%	6.6 - 26.6%
Total Liabilities	60.0%	48.2 - 78.7%
Total Net Worth	40.0%	21.3 - 51.8%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

ALL FIRMS BY GEOGRAPHIC REGION

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PHWNE REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	15.4%	9.2 - 25.0%
Total Assets to Net Worth	2.1X	1.5 - 2.7X
Net Profit After Tax to Total Assets	7.4%	4.9 - 11.8%
Net Sales to Total Assets	2.7X	2.3 - 2.9X
Net Profit After Tax to Net Sales	2.7%	1.6 - 4.4%
Net Profit Before Tax to Net Worth	23.7%	16.9 - 34.4%
Net Profit Before Tax to Total Assets	13.1%	7.0 - 16.6%
EBIT to Total Assets	14.4%	9.5 - 19.0%
SALES ANALYSIS		
Net Sales($000)	$6,726	$4,363 - 12,726
Percent Sales Change from Prior Year	10.5%	4.2 - 21.7%
Sales Mix:		
Direct Sales	5.6%	2.0 - 8.9%
Warehouse Sales - Counter and Delivery	94.4%	91.1 - 98.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	49.8%	37.0 - 60.0%
Heating & Cooling Supplies & Equipment	29.0%	20.0 - 39.0%
Industrial P-V-F (Pipes-Valves-Fittings)	15.8%	1.0 - 20.0%
Other Industrial Supplies & Equipment	1.9%	0.0 - 2.0%
Other Products	3.6%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.1%	22.9 - 28.6%
Gross Margin on Direct Shipments	14.3%	11.0 - 25.0%
Gross Margin on Warehouse Sales	27.6%	25.5 - 31.3%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.93X	2.45 - 3.52X
Total Debt to Net Worth	105.3%	53.9 - 166.2%
Current Debt to Net Worth	85.8%	52.5 - 139.4%
Current Assets to Current Debt	2.51X	1.74 - 3.07X
Current Assets Minus Inventory/Curr Debt	0.97X	0.80 - 1.34X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.5	4.5 - 8.3
Average Invoice Size	$163	$101 - 215
Average Billing Line	$26.35	$18.05 - 35.87

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PHWNE REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$203,527	$187,812 - 288,430
Gross Margin Per Employee	$59,813	$47,279 - 70,399
Average Compensation Per Employee	$24,851	$20,372 - 29,989
Average Fringe Benefits Per Employee	$4,760	$3,714 - 7,022
Compensation & Fringes Per Employee	$29,221	$24,136 - 35,772
Payroll to Net Sales	11.2%	9.9 - 13.1%
Fringe Benefits to Net Sales	2.3%	1.8 - 3.1%
Payroll & Fringes to Net Sales	13.1%	10.7 - 14.8%
Payroll to Gross Margin	44.8%	38.0 - 49.6%
Fringe Benefits to Gross Margin	8.5%	6.3 - 11.6%
Payroll & Fringes to Gross Margin	49.7%	38.1 - 57.7%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.89X	3.32 - 5.03X
% of Whse Sales from Non-Stock Items	6.8%	1.8 - 17.3%
Cost of In-Stock Whse Sales/Ave Inventory	3.50X	3.16 - 4.51X
No. of Days Average Inventory Carried	94 Days	73 - 110 Days
Total Cost of Goods Sold to Ave Inventory	4.33X	3.37 - 5.63X
Whse Gross Margin Return on Ave Inventory	162%	120 - 189%
Turn & Earn Profitability Index	114%	90 - 138%
Percent of Firms on LIFO	42.9%	
ACCOUNTS RECEIVABLE		
Average Collection Period	52 Days	45 - 58 Days
Gross Margin Return on Receivables	187%	153 - 217%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	61.3%	54.8 - 69.4%
31-60 Days Outstanding	20.9%	16.5 - 22.3%
61-90 Days Outstanding	9.2%	5.2 - 10.6%
Over 90 Days Outstanding	8.7%	5.2 - 11.4%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,927	$1,158 - 2,471
31-60 Days Outstanding	$2,199	$1,512 - 2,730
61-90 Days Outstanding	$1,776	$1,134 - 3,684
Over 90 Days Outstanding	$1,817	$1,529 - 2,843
Total	$1,934	$1,256 - 2,545
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	62.7%	56.6 - 68.8%
31-60 Days Outstanding	19.8%	14.4 - 23.1%
61-90 Days Outstanding	9.2%	6.8 - 11.7%
Over 90 Days Outstanding	8.3%	4.9 - 10.5%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PHWNE REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	73.9%	71.4 - 77.1%
Gross Margin	26.1%	22.9 - 28.6%
Operating Expenses:		
Selling Expenses	5.2%	3.8 - 6.9%
Delivery Expenses	2.3%	1.6 - 3.0%
Warehouse Expenses	2.9%	1.6 - 3.1%
General & Administrative Expenses	8.9%	6.1 - 10.9%
Occupancy Expenses	1.9%	0.9 - 2.4%
Other Operating Expenses	0.5%	0.0 - 0.3%
Total Operating Expenses	21.6%	18.9 - 23.6%
Net Operating Profit	4.5%	2.5 - 6.1%
Non-Operating Income	1.6%	0.5 - 2.8%
Non-Operating Expenses	1.4%	0.9 - 1.8%
Net Profit Before Tax	4.7%	2.2 - 6.9%
Net Profit After Tax	2.7%	1.6 - 4.4%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	21.6%	18.9 - 23.6%
Total Operating Expense to Gross Margin	82.9%	79.3 - 90.7%
Non-People Expense to Net Sales	7.6%	5.8 - 9.1%
Non-People Expense to Gross Margin	28.7%	23.1 - 31.5%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.7%	0.4 - 1.3%
Times Interest Earned	7.8X	3.3 - 16.1X
BALANCE SHEET		
Cash	6.0%	1.3 - 6.2%
Accounts & Notes Receivable, Trade(Net)	32.4%	23.3 - 39.6%
Inventory	47.0%	41.8 - 52.3%
Other Current Assets	3.9%	0.3 - 2.5%
Total Current Assets	89.3%	86.8 - 94.6%
All Other Assets	10.8%	5.4 - 13.2%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	39.9%	26.8 - 51.8%
Total Long-Term Liabilities	10.3%	0.2 - 10.8%
Total Liabilities	50.2%	35.0 - 62.6%
Total Net Worth	49.8%	37.4 - 65.0%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

NYSPHW REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	14.6%	9.0 - 20.1%
Total Assets to Net Worth	1.6X	1.3 - 3.1X
Net Profit After Tax to Total Assets	7.2%	4.4 - 11.2%
Net Sales to Total Assets	2.6X	2.1 - 3.0X
Net Profit After Tax to Net Sales	3.2%	1.5 - 4.6%
Net Profit Before Tax to Net Worth	21.0%	13.0 - 26.4%
Net Profit Before Tax to Total Assets	11.2%	8.2 - 14.4%
EBIT to Total Assets	14.7%	11.1 - 15.9%
SALES ANALYSIS		
Net Sales($000)	$7,217	$3,357 - 12,725
Percent Sales Change from Prior Year	17.9%	11.7 - 24.1%
Sales Mix:		
Direct Sales	7.2%	1.9 - 13.1%
Warehouse Sales - Counter and Delivery	92.8%	86.9 - 98.2%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	60.3%	39.8 - 87.8%
Heating & Cooling Supplies & Equipment	15.5%	1.5 - 22.0%
Industrial P-V-F (Pipes-Valves-Fittings)	17.4%	0.8 - 21.3%
Other Industrial Supplies & Equipment	3.5%	0.0 - 8.0%
Other Products	3.3%	0.0 - 5.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.5%	24.7 - 26.7%
Gross Margin on Direct Shipments	11.0%	
Gross Margin on Warehouse Sales	28.9%	
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.92X	2.36 - 3.39X
Total Debt to Net Worth	64.4%	30.4 - 209.2%
Current Debt to Net Worth	54.4%	23.2 - 136.3%
Current Assets to Current Debt	2.57X	2.07 - 3.75X
Current Assets Minus Inventory/Curr Debt	1.05X	0.84 - 2.47X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	7.0	4.8 - 9.1
Average Invoice Size	$164	$109 - 202
Average Billing Line	$27.22	$16.46 - 31.01

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

NYSPHW REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$182,874	$170,095 - 246,627
Gross Margin Per Employee	$45,451	$42,070 - 52,675
Average Compensation Per Employee	$21,778	$19,809 - 24,514
Average Fringe Benefits Per Employee	$3,373	$2,936 - 6,034
Compensation & Fringes Per Employee	$25,995	$23,834 - 29,729
Payroll to Net Sales	11.7%	11.0 - 13.3%
Fringe Benefits to Net Sales	1.9%	1.6 - 2.5%
Payroll & Fringes to Net Sales	13.2%	10.4 - 15.0%
Payroll to Gross Margin	46.8%	43.6 - 51.1%
Fringe Benefits to Gross Margin	7.7%	6.3 - 10.2%
Payroll & Fringes to Gross Margin	52.6%	48.4 - 58.4%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.36X	
% of Whse Sales from Non-Stock Items	6.0%	4.8 - 13.8%
Cost of In-Stock Whse Sales/Ave Inventory	3.03X	
No. of Days Average Inventory Carried	109 Days	
Total Cost of Goods Sold to Ave Inventory	4.13X	3.49 - 5.74X
Whse Gross Margin Return on Ave Inventory	150%	
Turn & Earn Profitability Index	100%	
Percent of Firms on LIFO	27.7%	
ACCOUNTS RECEIVABLE		
Average Collection Period	51 Days	43 - 63 Days
Gross Margin Return on Receivables	172%	143 - 189%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	67.5%	57.8 - 76.5%
31-60 Days Outstanding	15.7%	10.4 - 21.6%
61-90 Days Outstanding	6.6%	4.4 - 7.6%
Over 90 Days Outstanding	10.3%	5.0 - 16.4%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$903	$706 - 1,181
31-60 Days Outstanding	$1,192	$494 - 1,417
61-90 Days Outstanding	$1,174	$467 - 1,998
Over 90 Days Outstanding	$1,403	$982 - 2,795
Total	$909	$734 - 1,296
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	73.3%	64.8 - 81.2%
31-60 Days Outstanding	13.0%	6.3 - 18.5%
61-90 Days Outstanding	6.2%	4.5 - 8.9%
Over 90 Days Outstanding	7.6%	5.0 - 10.2%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

NYSPHW REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.5%	73.3 - 75.3%
Gross Margin	25.5%	24.7 - 26.7%
Operating Expenses:		
Selling Expenses	6.4%	4.4 - 7.7%
Delivery Expenses	1.7%	1.0 - 2.2%
Warehouse Expenses	1.8%	0.9 - 2.8%
General & Administrative Expenses	9.2%	7.0 - 10.6%
Occupancy Expenses	1.9%	1.3 - 2.6%
Other Operating Expenses	0.2%	0.0 - 0.0%
Total Operating Expenses	21.2%	19.8 - 22.8%
Net Operating Profit	4.3%	3.3 - 6.2%
Non-Operating Income	1.8%	1.4 - 2.4%
Non-Operating Expenses	1.0%	0.6 - 1.2%
Net Profit Before Tax	5.2%	3.4 - 7.6%
Net Profit After Tax	3.2%	1.5 - 4.6%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	21.2%	19.8 - 22.8%
Total Operating Expense to Gross Margin	83.5%	77.5 - 87.8%
Non-People Expense to Net Sales	6.9%	5.7 - 8.4%
Non-People Expense to Gross Margin	27.2%	21.7 - 33.5%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.7%	0.1 - 1.2%
Times Interest Earned	6.2X	3.7 - 46.0X
BALANCE SHEET		
Cash	8.6%	1.3 - 12.1%
Accounts & Notes Receivable, Trade(Net)	31.8%	24.6 - 34.6%
Inventory	44.1%	32.4 - 54.9%
Other Current Assets	2.2%	0.3 - 2.2%
Total Current Assets	86.7%	84.4 - 93.2%
All Other Assets	13.3%	6.8 - 15.6%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	34.2%	14.6 - 45.0%
Total Long-Term Liabilities	9.8%	0.0 - 16.3%
Total Liabilities	44.1%	23.3 - 67.7%
Total Net Worth	55.9%	32.4 - 76.7%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

JCA REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	6.9%	
Total Assets to Net Worth	2.8X	
Net Profit After Tax to Total Assets	2.6%	
Net Sales to Total Assets	2.4X	
Net Profit After Tax to Net Sales	1.1%	
Net Profit Before Tax to Net Worth	10.6%	
Net Profit Before Tax to Total Assets	4.0%	
EBIT to Total Assets	INSUFFICIENT DATA	
SALES ANALYSIS		
Net Sales($000)	$6,841	
Percent Sales Change from Prior Year	INSUFFICIENT DATA	
Sales Mix:		
Direct Sales	6.3%	
Warehouse Sales - Counter and Delivery	93.8%	
TOTAL SALES	100.0%	
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	66.3%	
Heating & Cooling Supplies & Equipment	27.5%	
Industrial P-V-F (Pipes-Valves-Fittings)	2.5%	
Other Industrial Supplies & Equipment	1.3%	
Other Products	2.5%	
TOTAL SALES	100.0%	
GROSS MARGIN		
Gross Margin on Net Sales	26.2%	
Gross Margin on Direct Shipments	INSUFFICIENT DATA	
Gross Margin on Warehouse Sales	INSUFFICIENT DATA	
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.69X	
Total Debt to Net Worth	180.4%	
Current Debt to Net Worth	139.0%	
Current Assets to Current Debt	2.18X	
Current Assets Minus Inventory/Curr Debt	0.96X	
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	INSUFFICIENT DATA	
Average Invoice Size	INSUFFICIENT DATA	
Average Billing Line	INSUFFICIENT DATA	

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

JCA REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	INSUFFICIENT DATA	
Gross Margin Per Employee	INSUFFICIENT DATA	
Average Compensation Per Employee	INSUFFICIENT DATA	
Average Fringe Benefits Per Employee	INSUFFICIENT DATA	
Compensation & Fringes Per Employee	INSUFFICIENT DATA	
Payroll to Net Sales	INSUFFICIENT DATA	
Fringe Benefits to Net Sales	INSUFFICIENT DATA	
Payroll & Fringes to Net Sales		
Payroll to Gross Margin	INSUFFICIENT DATA	
Fringe Benefits to Gross Margin	INSUFFICIENT DATA	
Payroll & Fringes to Gross Margin		
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	INSUFFICIENT DATA	
% of Whse Sales from Non-Stock Items	INSUFFICIENT DATA	
Cost of In-Stock Whse Sales/Ave Inventory	INSUFFICIENT DATA	
No. of Days Average Inventory Carried	INSUFFICIENT DATA	
Total Cost of Goods Sold to Ave Inventory	INSUFFICIENT DATA	
Whse Gross Margin Return on Ave Inventory	INSUFFICIENT DATA	
Turn & Earn Profitability Index	INSUFFICIENT DATA	
Percent of Firms on LIFO	100.0%	
ACCOUNTS RECEIVABLE		
Average Collection Period	INSUFFICIENT DATA	
Gross Margin Return on Receivables	INSUFFICIENT DATA	
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	53.5%	
31-60 Days Outstanding	16.7%	
61-90 Days Outstanding	7.5%	
Over 90 Days Outstanding	22.3%	
Total	100.0%	
Average Account Balance:		
Current (0-30 Days Outstanding)	INSUFFICIENT DATA	
31-60 Days Outstanding	INSUFFICIENT DATA	
61-90 Days Outstanding	INSUFFICIENT DATA	
Over 90 Days Outstanding	INSUFFICIENT DATA	
Total	INSUFFICIENT DATA	
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	49.0%	
31-60 Days Outstanding	23.4%	
61-90 Days Outstanding	13.5%	
Over 90 Days Outstanding	14.1%	
Total	100.0%	

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

JCA REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	
Cost of Goods Sold	73.8%	
Gross Margin	26.2%	
Operating Expenses:		
Selling Expenses	4.9%	
Delivery Expenses	3.0%	
Warehouse Expenses	2.2%	
General & Administrative Expenses	13.3%	
Occupancy Expenses	1.3%	
Other Operating Expenses	0.0%	
Total Operating Expenses	24.8%	
Net Operating Profit	1.4%	
Non-Operating Income	1.6%	
Non-Operating Expenses	1.4%	
Net Profit Before Tax	1.7%	
Net Profit After Tax	1.1%	
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	24.8%	
Total Operating Expense to Gross Margin	94.5%	
Non-People Expense to Net Sales	8.0%	
Non-People Expense to Gross Margin	34.3%	
INTEREST EXPENSE		
Interest Expense to Net Sales		INSUFFICIENT DATA
Times Interest Earned		INSUFFICIENT DATA
BALANCE SHEET		
Cash	7.3%	
Accounts & Notes Receivable, Trade(Net)	33.1%	
Inventory	45.1%	
Other Current Assets	3.3%	
Total Current Assets	88.8%	
All Other Assets	11.2%	
Total Assets	100.0%	
Total Current Liabilities	43.2%	
Total Long-Term Liabilities	15.3%	
Total Liabilities	58.5%	
Total Net Worth	41.5%	
Total Liabilities & Net Worth	100.0%	

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

MAWA REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	13.1%	9.3 - 20.1%
Total Assets to Net Worth	2.3X	2.0 - 3.5X
Net Profit After Tax to Total Assets	5.8%	2.9 - 8.5%
Net Sales to Total Assets	2.8X	2.5 - 3.2X
Net Profit After Tax to Net Sales	1.9%	1.0 - 3.6%
Net Profit Before Tax to Net Worth	16.5%	11.6 - 30.3%
Net Profit Before Tax to Total Assets	7.4%	3.6 - 12.9%
EBIT to Total Assets	9.9%	6.7 - 13.8%
SALES ANALYSIS		
Net Sales($000)	$8,792	$5,042 - 17,330
Percent Sales Change from Prior Year	18.6%	12.2 - 26.1%
Sales Mix:		
Direct Sales	6.3%	1.3 - 11.4%
Warehouse Sales - Counter and Delivery	93.7%	88.6 - 98.7%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	47.5%	32.4 - 60.8%
Heating & Cooling Supplies & Equipment	24.6%	11.3 - 38.8%
Industrial P-V-F (Pipes-Valves-Fittings)	14.4%	0.0 - 15.8%
Other Industrial Supplies & Equipment	3.6%	0.0 - 5.0%
Other Products	9.9%	0.0 - 9.3%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.1%	22.5 - 27.1%
Gross Margin on Direct Shipments	11.1%	9.3 - 12.5%
Gross Margin on Warehouse Sales	25.7%	23.0 - 28.3%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.41X	2.86 - 3.69X
Total Debt to Net Worth	132.5%	95.3 - 245.1%
Current Debt to Net Worth	104.7%	60.1 - 186.7%
Current Assets to Current Debt	1.93X	1.47 - 2.50X
Current Assets Minus Inventory/Curr Debt	0.90X	0.66 - 1.30X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	4.4 - 10.0
Average Invoice Size	$152	$126 - 294
Average Billing Line	$28.60	$18.16 - 39.80

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

MAWA REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$218,065	$188,397 - 253,330
Gross Margin Per Employee	$52,874	$45,071 - 66,660
Average Compensation Per Employee	$25,152	$19,234 - 30,123
Average Fringe Benefits Per Employee	$4,352	$2,874 - 5,743
Compensation & Fringes Per Employee	$29,476	$22,718 - 35,135
Payroll to Net Sales	10.9%	9.9 - 13.2%
Fringe Benefits to Net Sales	2.0%	1.7 - 2.3%
Payroll & Fringes to Net Sales	12.4%	2.3 - 14.5%
Payroll to Gross Margin	46.4%	41.6 - 52.0%
Fringe Benefits to Gross Margin	7.7%	6.9 - 9.3%
Payroll & Fringes to Gross Margin	51.0%	9.3 - 57.7%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.86X	3.79 - 6.55X
% of Whse Sales from Non-Stock Items	12.6%	5.8 - 20.3%
Cost of In-Stock Whse Sales/Ave Inventory	4.23X	3.38 - 5.45X
No. of Days Average Inventory Carried	75 Days	56 - 97 Days
Total Cost of Goods Sold to Ave Inventory	4.89X	3.79 - 6.81X
Whse Gross Margin Return on Ave Inventory	156%	128 - 243%
Turn & Earn Profitability Index	115%	97 - 183%
Percent of Firms on LIFO	42.9%	
ACCOUNTS RECEIVABLE		
Average Collection Period	51 Days	41 - 54 Days
Gross Margin Return on Receivables	189%	159 - 215%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	68.2%	61.4 - 72.1%
31-60 Days Outstanding	17.6%	15.5 - 22.4%
61-90 Days Outstanding	6.4%	4.8 - 7.5%
Over 90 Days Outstanding	7.8%	3.3 - 9.7%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$2,092	$1,320 - 2,889
31-60 Days Outstanding	$2,204	$1,082 - 4,706
61-90 Days Outstanding	$2,187	$1,383 - 6,882
Over 90 Days Outstanding	$1,899	$1,107 - 3,606
Total	$1,727	$1,276 - 3,109
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	74.5%	69.2 - 83.0%
31-60 Days Outstanding	15.3%	10.0 - 21.3%
61-90 Days Outstanding	4.4%	2.5 - 6.3%
Over 90 Days Outstanding	5.8%	2.7 - 7.3%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

MAWA REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.9%	72.9 - 77.5%
Gross Margin	25.1%	22.5 - 27.1%
Operating Expenses:		
Selling Expenses	5.9%	4.4 - 7.0%
Delivery Expenses	1.8%	1.4 - 2.3%
Warehouse Expenses	2.6%	1.5 - 3.6%
General & Administrative Expenses	8.9%	6.8 - 9.9%
Occupancy Expenses	2.0%	1.2 - 2.8%
Other Operating Expenses	0.3%	0.0 - 0.0%
Total Operating Expenses	21.5%	19.6 - 23.4%
Net Operating Profit	3.6%	2.2 - 4.8%
Non-Operating Income	1.8%	1.4 - 2.4%
Non-Operating Expenses	1.7%	1.2 - 2.5%
Net Profit Before Tax	3.7%	1.6 - 5.3%
Net Profit After Tax	1.9%	1.0 - 3.6%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	21.5%	19.6 - 23.4%
Total Operating Expense to Gross Margin	85.9%	81.8 - 90.7%
Non-People Expense to Net Sales	7.7%	6.6 - 7.9%
Non-People Expense to Gross Margin	31.2%	23.8 - 33.9%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.7%	0.3 - 1.3%
Times Interest Earned	4.7X	2.5 - 12.1X
BALANCE SHEET		
Cash	3.3%	0.5 - 2.7%
Accounts & Notes Receivable, Trade(Net)	36.0%	29.7 - 42.3%
Inventory	44.3%	36.8 - 52.6%
Other Current Assets	2.2%	0.5 - 2.2%
Total Current Assets	85.8%	82.4 - 92.2%
All Other Assets	14.2%	7.8 - 17.6%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	45.7%	30.9 - 59.8%
Total Long-Term Liabilities	11.1%	1.6 - 16.8%
Total Liabilities	56.7%	48.8 - 68.8%
Total Net Worth	43.3%	31.2 - 51.2%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

CWA REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	8.2%	4.3 - 13.7%
Total Assets to Net Worth	2.2X	1.5 - 3.0X
Net Profit After Tax to Total Assets	4.2%	1.9 - 5.7%
Net Sales to Total Assets	2.6X	2.1 - 3.0X
Net Profit After Tax to Net Sales	1.4%	0.7 - 2.2%
Net Profit Before Tax to Net Worth	12.7%	6.2 - 19.7%
Net Profit Before Tax to Total Assets	5.6%	2.5 - 8.6%
EBIT to Total Assets	6.5%	4.1 - 9.7%
SALES ANALYSIS		
Net Sales($000)	$5,283	$3,379 - 9,316
Percent Sales Change from Prior Year	11.7%	3.2 - 18.9%
Sales Mix:		
Direct Sales	9.9%	4.1 - 14.1%
Warehouse Sales - Counter and Delivery	90.1%	85.9 - 95.9%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	46.1%	25.0 - 69.0%
Heating & Cooling Supplies & Equipment	14.9%	0.3 - 27.5%
Industrial P-V-F (Pipes-Valves-Fittings)	19.3%	0.0 - 23.0%
Other Industrial Supplies & Equipment	5.3%	0.0 - 5.0%
Other Products	14.4%	0.0 - 26.3%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.6%	22.3 - 27.5%
Gross Margin on Direct Shipments	11.4%	8.4 - 16.0%
Gross Margin on Warehouse Sales	26.2%	23.2 - 29.1%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.90X	2.57 - 3.57X
Total Debt to Net Worth	118.7%	47.7 - 201.8%
Current Debt to Net Worth	84.7%	37.8 - 134.2%
Current Assets to Current Debt	2.50X	1.76 - 3.53X
Current Assets Minus Inventory/Curr Debt	0.95X	0.70 - 1.53X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	3.8 - 6.0
Average Invoice Size	$169	$106 - 230
Average Billing Line	$34.14	$22.80 - 52.60

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

CWA REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$184,222	$155,020 - 212,016
Gross Margin Per Employee	$45,696	$40,777 - 52,396
Average Compensation Per Employee	$23,857	$21,435 - 26,662
Average Fringe Benefits Per Employee	$3,928	$3,252 - 4,954
Compensation & Fringes Per Employee	$27,286	$25,232 - 31,057
Payroll to Net Sales	12.7%	11.1 - 15.3%
Fringe Benefits to Net Sales	2.3%	1.7 - 2.7%
Payroll & Fringes to Net Sales	13.4%	10.8 - 17.5%
Payroll to Gross Margin	52.5%	48.3 - 56.3%
Fringe Benefits to Gross Margin	8.3%	7.4 - 10.5%
Payroll & Fringes to Gross Margin	58.7%	47.4 - 65.0%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.32X	2.74 - 4.13X
% of Whse Sales from Non-Stock Items	15.0%	10.0 - 22.6%
Cost of In-Stock Whse Sales/Ave Inventory	2.84X	2.10 - 3.39X
No. of Days Average Inventory Carried	110 Days	88 - 134 Days
Total Cost of Goods Sold to Ave Inventory	3.81X	3.04 - 4.92X
Whse Gross Margin Return on Ave Inventory	113%	98 - 148%
Turn & Earn Profitability Index	81%	71 - 111%
Percent of Firms on LIFO	65.1%	
ACCOUNTS RECEIVABLE		
Average Collection Period	44 Days	40 - 55 Days
Gross Margin Return on Receivables	211%	155 - 234%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	66.5%	56.9 - 73.4%
31-60 Days Outstanding	17.6%	12.4 - 22.0%
61-90 Days Outstanding	6.8%	4.7 - 7.8%
Over 90 Days Outstanding	9.2%	5.0 - 12.2%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,183	$833 - 2,080
31-60 Days Outstanding	$1,157	$815 - 1,702
61-90 Days Outstanding	$1,031	$600 - 2,749
Over 90 Days Outstanding	$1,086	$719 - 3,286
Total	$1,143	$808 - 1,840
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	62.4%	55.0 - 76.6%
31-60 Days Outstanding	20.8%	14.3 - 28.5%
61-90 Days Outstanding	8.1%	4.2 - 11.0%
Over 90 Days Outstanding	8.8%	2.9 - 11.8%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

CWA REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.4%	72.5 - 77.7%
Gross Margin	24.6%	22.3 - 27.5%
Operating Expenses:		
Selling Expenses	7.1%	6.2 - 8.2%
Delivery Expenses	1.9%	1.5 - 2.3%
Warehouse Expenses	2.8%	1.8 - 3.5%
General & Administrative Expenses	8.5%	6.0 - 9.7%
Occupancy Expenses	1.8%	1.1 - 2.4%
Other Operating Expenses	0.5%	0.0 - 0.6%
Total Operating Expenses	22.6%	20.0 - 24.9%
Net Operating Profit	2.0%	0.5 - 3.2%
Non-Operating Income	2.1%	1.3 - 2.5%
Non-Operating Expenses	1.9%	1.2 - 2.5%
Net Profit Before Tax	2.2%	0.9 - 2.8%
Net Profit After Tax	1.4%	0.7 - 2.2%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.6%	20.0 - 24.9%
Total Operating Expense to Gross Margin	92.1%	86.5 - 98.0%
Non-People Expense to Net Sales	7.7%	6.7 - 8.8%
Non-People Expense to Gross Margin	31.8%	29.5 - 36.3%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.6%	0.2 - 1.5%
Times Interest Earned	3.2X	2.1 - 8.3X
BALANCE SHEET		
Cash	3.9%	0.4 - 3.8%
Accounts & Notes Receivable, Trade(Net)	30.3%	24.5 - 35.2%
Inventory	52.5%	46.9 - 59.7%
Other Current Assets	1.4%	0.3 - 1.7%
Total Current Assets	88.1%	85.0 - 92.2%
All Other Assets	11.9%	7.8 - 15.0%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	38.6%	24.3 - 52.3%
Total Long-Term Liabilities	13.7%	1.7 - 16.6%
Total Liabilities	52.3%	32.3 - 67.7%
Total Net Worth	47.7%	32.3 - 67.7%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

SWA REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	8.6%	6.6 - 12.3%
Total Assets to Net Worth	2.1X	1.7 - 3.0X
Net Profit After Tax to Total Assets	3.7%	3.0 - 6.0%
Net Sales to Total Assets	2.5X	2.2 - 3.0X
Net Profit After Tax to Net Sales	1.4%	1.0 - 2.3%
Net Profit Before Tax to Net Worth	13.5%	10.4 - 19.7%
Net Profit Before Tax to Total Assets	6.0%	3.8 - 8.9%
EBIT to Total Assets	8.4%	7.4 - 11.7%
SALES ANALYSIS		
Net Sales($000)	$8,513	$4,160 - 20,809
Percent Sales Change from Prior Year	5.5%	1.7 - 14.8%
Sales Mix:		
Direct Sales	11.1%	5.4 - 18.3%
Warehouse Sales - Counter and Delivery	88.9%	81.7 - 94.6%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	66.3%	50.0 - 90.0%
Heating & Cooling Supplies & Equipment	9.5%	0.0 - 15.0%
Industrial P-V-F (Pipes-Valves-Fittings)	13.5%	0.0 - 10.0%
Other Industrial Supplies & Equipment	2.3%	0.0 - 2.5%
Other Products	8.5%	0.0 - 10.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.3%	20.6 - 26.0%
Gross Margin on Direct Shipments	13.5%	9.6 - 16.1%
Gross Margin on Warehouse Sales	23.4%	22.4 - 24.9%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.90X	2.71 - 3.25X
Total Debt to Net Worth	112.5%	69.1 - 196.0%
Current Debt to Net Worth	78.5%	41.6 - 137.1%
Current Assets to Current Debt	2.56X	1.78 - 3.28X
Current Assets Minus Inventory/Curr Debt	1.05X	0.75 - 1.33X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.5	5.0 - 7.4
Average Invoice Size	$180	$135 - 318
Average Billing Line	$30.28	$19.59 - 69.24

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

SWA REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$190,302	$159,855 - 223,464
Gross Margin Per Employee	$43,505	$40,650 - 46,771
Average Compensation Per Employee	$20,875	$19,169 - 23,635
Average Fringe Benefits Per Employee	$3,008	$2,351 - 3,926
Compensation & Fringes Per Employee	$23,506	$20,998 - 27,246
Payroll to Net Sales	11.9%	10.1 - 14.2%
Fringe Benefits to Net Sales	1.5%	1.3 - 1.9%
Payroll & Fringes to Net Sales	12.9%	10.1 - 14.9%
Payroll to Gross Margin	50.7%	45.8 - 52.9%
Fringe Benefits to Gross Margin	6.4%	5.5 - 8.1%
Payroll & Fringes to Gross Margin	55.7%	46.7 - 59.1%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.54X	3.25 - 4.39X
% of Whse Sales from Non-Stock Items	7.4%	5.0 - 10.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.35X	3.01 - 3.88X
No. of Days Average Inventory Carried	103 Days	83 - 112 Days
Total Cost of Goods Sold to Ave Inventory	4.44X	3.57 - 5.39X
Whse Gross Margin Return on Ave Inventory	110%	97 - 149%
Turn & Earn Profitability Index	84%	74 - 99%
Percent of Firms on LIFO	51.9%	
ACCOUNTS RECEIVABLE		
Average Collection Period	47 Days	44 - 51 Days
Gross Margin Return on Receivables	174%	159 - 212%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	65.8%	58.1 - 70.7%
31-60 Days Outstanding	17.0%	12.9 - 21.0%
61-90 Days Outstanding	7.7%	5.7 - 8.9%
Over 90 Days Outstanding	9.6%	6.0 - 13.4%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,451	$633 - 2,011
31-60 Days Outstanding	$1,343	$806 - 1,781
61-90 Days Outstanding	$1,602	$585 - 3,525
Over 90 Days Outstanding	$1,909	$642 - 3,206
Total	$1,595	$782 - 2,137
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	73.6%	70.2 - 83.4%
31-60 Days Outstanding	15.1%	12.1 - 17.3%
61-90 Days Outstanding	5.5%	3.6 - 7.7%
Over 90 Days Outstanding	5.8%	2.8 - 8.3%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

SWA REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.7%	74.0 - 79.4%
Gross Margin	24.3%	20.6 - 26.0%
Operating Expenses:		
Selling Expenses	6.3%	4.6 - 7.3%
Delivery Expenses	1.3%	0.7 - 1.8%
Warehouse Expenses	2.8%	1.7 - 3.2%
General & Administrative Expenses	8.9%	6.4 - 9.4%
Occupancy Expenses	2.3%	1.2 - 2.6%
Other Operating Expenses	0.5%	0.0 - 0.2%
Total Operating Expenses	22.0%	19.2 - 22.9%
Net Operating Profit	2.3%	1.5 - 2.9%
Non-Operating Income	2.1%	1.2 - 2.8%
Non-Operating Expenses	1.9%	1.5 - 2.6%
Net Profit Before Tax	2.5%	1.3 - 3.1%
Net Profit After Tax	1.4%	1.0 - 2.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.0%	19.2 - 22.9%
Total Operating Expense to Gross Margin	91.1%	87.0 - 93.1%
Non-People Expense to Net Sales	8.0%	6.3 - 8.3%
Non-People Expense to Gross Margin	32.2%	29.0 - 34.4%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.0%	0.6 - 1.5%
Times Interest Earned	3.7X	2.1 - 6.2X
BALANCE SHEET		
Cash	3.5%	0.3 - 4.7%
Accounts & Notes Receivable, Trade(Net)	30.8%	25.2 - 36.2%
Inventory	49.8%	42.8 - 57.9%
Other Current Assets	1.5%	0.1 - 1.7%
Total Current Assets	85.6%	79.2 - 91.3%
All Other Assets	14.4%	8.7 - 20.8%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	39.9%	24.3 - 50.3%
Total Long-Term Liabilities	15.5%	2.9 - 24.9%
Total Liabilities	55.4%	41.2 - 67.4%
Total Net Worth	44.6%	32.6 - 58.8%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

MAD REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	13.8%	6.1 - 17.9%
Total Assets to Net Worth	1.9X	1.6 - 2.5X
Net Profit After Tax to Total Assets	7.8%	2.5 - 10.0%
Net Sales to Total Assets	2.5X	2.3 - 2.8X
Net Profit After Tax to Net Sales	3.0%	0.9 - 4.1%
Net Profit Before Tax to Net Worth	20.7%	11.7 - 27.1%
Net Profit Before Tax to Total Assets	10.4%	3.6 - 15.5%
EBIT to Total Assets	11.9%	6.9 - 18.3%
SALES ANALYSIS		
Net Sales($000)	$7,312	$4,448 - 14,170
Percent Sales Change from Prior Year	12.0%	8.7 - 13.4%
Sales Mix:		
Direct Sales	8.2%	5.1 - 13.4%
Warehouse Sales - Counter and Delivery	91.8%	86.6 - 94.9%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	55.5%	39.0 - 80.5%
Heating & Cooling Supplies & Equipment	8.9%	0.0 - 15.0%
Industrial P-V-F (Pipes-Valves-Fittings)	25.1%	0.0 - 29.3%
Other Industrial Supplies & Equipment	5.0%	0.0 - 5.0%
Other Products	5.6%	0.0 - 5.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.6%	23.5 - 29.7%
Gross Margin on Direct Shipments	12.1%	11.0 - 21.8%
Gross Margin on Warehouse Sales	27.0%	24.1 - 29.4%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.99X	2.72 - 3.52X
Total Debt to Net Worth	81.5%	49.2 - 144.0%
Current Debt to Net Worth	66.2%	40.2 - 118.5%
Current Assets to Current Debt	2.33X	1.78 - 3.15X
Current Assets Minus Inventory/Curr Debt	0.91X	0.78 - 1.44X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	4.8 - 10.2
Average Invoice Size	$206	$180 - 269
Average Billing Line	$34.74	$17.11 - 45.70

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

MAD REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$231,277	$187,673 - 263,379
Gross Margin Per Employee	$58,495	$49,967 - 70,044
Average Compensation Per Employee	$28,574	$24,082 - 33,000
Average Fringe Benefits Per Employee	$5,200	$4,075 - 7,386
Compensation & Fringes Per Employee	$33,709	$28,659 - 36,196
Payroll to Net Sales	12.1%	11.3 - 14.0%
Fringe Benefits to Net Sales	2.3%	2.1 - 3.0%
Payroll & Fringes to Net Sales	13.4%	8.8 - 16.0%
Payroll to Gross Margin	46.7%	44.6 - 51.4%
Fringe Benefits to Gross Margin	9.4%	7.5 - 11.7%
Payroll & Fringes to Gross Margin	53.1%	31.5 - 60.1%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.50X	3.21 - 4.08X
% of Whse Sales from Non-Stock Items	15.0%	5.0 - 18.2%
Cost of In-Stock Whse Sales/Ave Inventory	2.81X	2.63 - 3.01X
No. of Days Average Inventory Carried	104 Days	90 - 114 Days
Total Cost of Goods Sold to Ave Inventory	4.05X	3.84 - 4.71X
Whse Gross Margin Return on Ave Inventory	132%	125 - 145%
Turn & Earn Profitability Index	94%	89 - 104%
Percent of Firms on LIFO	43.8%	
ACCOUNTS RECEIVABLE		
Average Collection Period	51 Days	46 - 55 Days
Gross Margin Return on Receivables	186%	162 - 253%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	68.0%	62.0 - 74.2%
31-60 Days Outstanding	18.6%	14.6 - 21.5%
61-90 Days Outstanding	7.2%	5.3 - 9.6%
Over 90 Days Outstanding	6.2%	3.1 - 8.5%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,559	$1,235 - 2,200
31-60 Days Outstanding	$1,464	$1,038 - 2,807
61-90 Days Outstanding	$1,436	$1,123 - 1,644
Over 90 Days Outstanding	$1,914	$1,089 - 2,398
Total	$1,778	$1,375 - 2,322
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	70.9%	64.1 - 78.7%
31-60 Days Outstanding	16.3%	11.6 - 21.0%
61-90 Days Outstanding	7.5%	4.1 - 10.1%
Over 90 Days Outstanding	5.3%	3.3 - 6.9%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

MAD REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	73.5%	70.3 - 76.5%
Gross Margin	26.6%	23.5 - 29.7%
Operating Expenses:		
Selling Expenses	6.9%	5.3 - 8.6%
Delivery Expenses	2.1%	1.6 - 2.9%
Warehouse Expenses	2.3%	1.6 - 2.9%
General & Administrative Expenses	9.8%	6.5 - 11.0%
Occupancy Expenses	1.9%	1.3 - 2.0%
Other Operating Expenses	0.2%	0.0 - 0.0%
Total Operating Expenses	23.1%	21.3 - 25.7%
Net Operating Profit	3.5%	1.4 - 5.1%
Non-Operating Income	2.1%	1.2 - 2.8%
Non-Operating Expenses	2.0%	1.5 - 2.7%
Net Profit Before Tax	3.5%	1.1 - 5.7%
Net Profit After Tax	3.0%	0.9 - 4.1%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	23.1%	21.3 - 25.7%
Total Operating Expense to Gross Margin	87.4%	83.4 - 95.0%
Non-People Expense to Net Sales	7.1%	6.1 - 8.4%
Non-People Expense to Gross Margin	27.3%	26.1 - 29.5%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.6%	0.4 - 1.0%
Times Interest Earned	6.7X	3.4 - 9.1X
BALANCE SHEET		
Cash	5.5%	0.3 - 9.7%
Accounts & Notes Receivable, Trade(Net)	32.4%	28.6 - 35.1%
Inventory	46.5%	41.6 - 52.6%
Other Current Assets	1.0%	0.1 - 1.5%
Total Current Assets	85.5%	77.9 - 91.9%
All Other Assets	14.5%	8.1 - 22.1%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	39.8%	26.7 - 55.4%
Total Long-Term Liabilities	8.5%	1.4 - 13.4%
Total Liabilities	48.4%	36.6 - 59.5%
Total Net Worth	51.7%	40.5 - 63.4%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

METRO CHICAGO & NORTHERN IL REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	12.9%	
Total Assets to Net Worth	1.8X	
Net Profit After Tax to Total Assets	8.4%	
Net Sales to Total Assets	2.5X	
Net Profit After Tax to Net Sales	3.3%	
Net Profit Before Tax to Net Worth	21.4%	
Net Profit Before Tax to Total Assets	11.3%	
EBIT to Total Assets	13.8%	
SALES ANALYSIS		
Net Sales($000)	$6,164	
Percent Sales Change from Prior Year	12.9%	
Sales Mix:		
Direct Sales	15.2%	
Warehouse Sales - Counter and Delivery	84.8%	
TOTAL SALES	100.0%	
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	45.2%	
Heating & Cooling Supplies & Equipment	8.7%	
Industrial P-V-F (Pipes-Valves-Fittings)	43.9%	
Other Industrial Supplies & Equipment	1.4%	
Other Products	0.7%	
TOTAL SALES	100.0%	
GROSS MARGIN		
Gross Margin on Net Sales	33.0%	
Gross Margin on Direct Shipments	9.9%	
Gross Margin on Warehouse Sales	34.0%	
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.84X	
Total Debt to Net Worth	78.4%	
Current Debt to Net Worth	60.9%	
Current Assets to Current Debt	2.51X	
Current Assets Minus Inventory/Curr Debt	1.20X	
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	7.3	
Average Invoice Size	$277	
Average Billing Line	$42.97	

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

METRO CHICAGO & NORTHERN IL REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$236,030	
Gross Margin Per Employee	$59,837	
Average Compensation Per Employee	$27,526	
Average Fringe Benefits Per Employee	$5,494	
Compensation & Fringes Per Employee	$32,604	
Payroll to Net Sales	12.6%	
Fringe Benefits to Net Sales	2.8%	
Payroll & Fringes to Net Sales	12.8%	
Payroll to Gross Margin	46.1%	
Fringe Benefits to Gross Margin	9.2%	
Payroll & Fringes to Gross Margin	54.6%	
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.67X	
% of Whse Sales from Non-Stock Items	24.2%	
Cost of In-Stock Whse Sales/Ave Inventory	2.69X	
No. of Days Average Inventory Carried	99 Days	
Total Cost of Goods Sold to Ave Inventory	4.68X	
Whse Gross Margin Return on Ave Inventory	153%	
Turn & Earn Profitability Index	108%	
Percent of Firms on LIFO	66.7%	
ACCOUNTS RECEIVABLE		
Average Collection Period	49 Days	
Gross Margin Return on Receivables	211%	
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	54.8%	
31-60 Days Outstanding	26.4%	
61-90 Days Outstanding	10.9%	
Over 90 Days Outstanding	7.9%	
Total	100.0%	
Average Account Balance:		
Current (0-30 Days Outstanding)	$3,257	
31-60 Days Outstanding	$2,892	
61-90 Days Outstanding	$1,596	
Over 90 Days Outstanding		INSUFFICIENT DATA
Total	$3,716	
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	59.1%	
31-60 Days Outstanding	19.9%	
61-90 Days Outstanding	9.7%	
Over 90 Days Outstanding	11.4%	
Total	100.0%	

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

METRO CHICAGO & NORTHERN IL REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	
Cost of Goods Sold	67.0%	
Gross Margin	33.0%	
Operating Expenses:		
Selling Expenses	7.2%	
Delivery Expenses	3.0%	
Warehouse Expenses	5.2%	
General & Administrative Expenses	11.1%	
Occupancy Expenses	3.1%	
Other Operating Expenses	0.0%	
Total Operating Expenses	29.6%	
Net Operating Profit	3.4%	
Non-Operating Income	2.4%	
Non-Operating Expenses	1.9%	
Net Profit Before Tax	3.9%	
Net Profit After Tax	3.3%	
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	29.6%	
Total Operating Expense to Gross Margin	87.6%	
Non-People Expense to Net Sales	11.5%	
Non-People Expense to Gross Margin	30.6%	
INTEREST EXPENSE		
Interest Expense to Net Sales	0.6%	
Times Interest Earned	7.2X	
BALANCE SHEET		
Cash	6.8%	
Accounts & Notes Receivable, Trade(Net)	37.2%	
Inventory	47.1%	
Other Current Assets	2.2%	
Total Current Assets	93.3%	
All Other Assets	6.7%	
Total Assets	100.0%	
Total Current Liabilities	37.2%	
Total Long-Term Liabilities	8.1%	
Total Liabilities	45.3%	
Total Net Worth	54.7%	
Total Liabilities & Net Worth	100.0%	

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

MASA REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	10.1%	4.8 - 20.5%
Total Assets to Net Worth	1.8X	1.6 - 3.0X
Net Profit After Tax to Total Assets	4.7%	2.9 - 8.7%
Net Sales to Total Assets	2.5X	2.2 - 2.9X
Net Profit After Tax to Net Sales	1.8%	1.0 - 3.3%
Net Profit Before Tax to Net Worth	14.4%	7.8 - 23.8%
Net Profit Before Tax to Total Assets	6.8%	4.5 - 9.9%
EBIT to Total Assets	9.3%	6.9 - 12.0%
SALES ANALYSIS		
Net Sales($000)	$8,603	$4,298 - 22,282
Percent Sales Change from Prior Year	14.3%	8.4 - 19.1%
Sales Mix:		
Direct Sales	11.8%	6.4 - 14.8%
Warehouse Sales - Counter and Delivery	88.2%	85.2 - 93.6%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	49.2%	32.8 - 70.0%
Heating & Cooling Supplies & Equipment	17.2%	4.7 - 30.0%
Industrial P-V-F (Pipes-Valves-Fittings)	16.3%	0.0 - 19.9%
Other Industrial Supplies & Equipment	3.6%	0.0 - 2.8%
Other Products	13.7%	0.0 - 12.9%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	23.6%	21.5 - 25.8%
Gross Margin on Direct Shipments	12.6%	9.9 - 16.3%
Gross Margin on Warehouse Sales	24.5%	23.1 - 26.9%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.99X	2.48 - 3.26X
Total Debt to Net Worth	76.9%	56.8 - 202.2%
Current Debt to Net Worth	56.7%	42.3 - 140.9%
Current Assets to Current Debt	2.62X	1.77 - 3.33X
Current Assets Minus Inventory/Curr Debt	0.88X	0.75 - 1.26X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.8	3.5 - 6.0
Average Invoice Size	$185	$141 - 211
Average Billing Line	$38.56	$27.94 - 52.83

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

MASA REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$212,722	$186,261 - 234,290
Gross Margin Per Employee	$48,991	$42,743 - 57,589
Average Compensation Per Employee	$24,136	$20,596 - 27,483
Average Fringe Benefits Per Employee	$3,755	$3,211 - 4,760
Compensation & Fringes Per Employee	$27,392	$23,073 - 32,003
Payroll to Net Sales	11.5%	9.6 - 13.2%
Fringe Benefits to Net Sales	1.9%	1.6 - 2.3%
Payroll & Fringes to Net Sales	12.5%	10.8 - 15.0%
Payroll to Gross Margin	48.9%	44.9 - 53.1%
Fringe Benefits to Gross Margin	8.1%	6.8 - 9.6%
Payroll & Fringes to Gross Margin	56.5%	50.2 - 60.1%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.60X	2.95 - 4.28X
% of Whse Sales from Non-Stock Items	10.0%	5.8 - 15.3%
Cost of In-Stock Whse Sales/Ave Inventory	3.21X	2.55 - 3.79X
No. of Days Average Inventory Carried	101 Days	85 - 124 Days
Total Cost of Goods Sold to Ave Inventory	4.08X	3.03 - 5.02X
Whse Gross Margin Return on Ave Inventory	113%	98 - 127%
Turn & Earn Profitability Index	89%	72 - 95%
Percent of Firms on LIFO	63.4%	
ACCOUNTS RECEIVABLE		
Average Collection Period	46 Days	41 - 55 Days
Gross Margin Return on Receivables	173%	148 - 213%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	68.1%	62.0 - 74.3%
31-60 Days Outstanding	16.3%	12.9 - 19.2%
61-90 Days Outstanding	8.1%	4.8 - 11.4%
Over 90 Days Outstanding	7.5%	2.7 - 11.4%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,460	$1,101 - 1,745
31-60 Days Outstanding	$1,565	$1,179 - 2,273
61-90 Days Outstanding	$1,718	$1,114 - 2,583
Over 90 Days Outstanding	$1,783	$1,135 - 2,921
Total	$1,471	$1,103 - 1,853
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	71.6%	66.0 - 78.7%
31-60 Days Outstanding	15.1%	11.2 - 19.3%
61-90 Days Outstanding	7.1%	5.5 - 8.6%
Over 90 Days Outstanding	6.2%	2.9 - 8.3%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

MASA REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	76.4%	74.2 - 78.5%
Gross Margin	23.6%	21.5 - 25.8%
Operating Expenses:		
Selling Expenses	6.5%	5.0 - 7.4%
Delivery Expenses	1.6%	1.2 - 2.0%
Warehouse Expenses	3.1%	1.9 - 3.5%
General & Administrative Expenses	7.6%	6.0 - 9.0%
Occupancy Expenses	1.8%	1.1 - 2.4%
Other Operating Expenses	0.3%	0.0 - 0.0%
Total Operating Expenses	20.7%	19.0 - 23.1%
Net Operating Profit	2.8%	1.7 - 3.8%
Non-Operating Income	1.9%	1.2 - 2.6%
Non-Operating Expenses	2.0%	1.2 - 2.7%
Net Profit Before Tax	2.7%	1.7 - 3.9%
Net Profit After Tax	1.8%	1.0 - 3.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	20.7%	19.0 - 23.1%
Total Operating Expense to Gross Margin	87.8%	83.3 - 92.4%
Non-People Expense to Net Sales	7.1%	6.3 - 7.5%
Non-People Expense to Gross Margin	30.5%	26.3 - 34.5%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.1%	0.5 - 1.5%
Times Interest Earned	4.0X	2.6 - 7.0X
BALANCE SHEET		
Cash	2.7%	0.4 - 2.8%
Accounts & Notes Receivable, Trade(Net)	31.4%	25.0 - 37.3%
Inventory	52.0%	45.4 - 59.2%
Other Current Assets	1.1%	0.2 - 1.4%
Total Current Assets	87.1%	83.3 - 92.4%
All Other Assets	12.9%	7.6 - 16.7%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	38.0%	24.4 - 50.8%
Total Long-Term Liabilities	12.4%	3.5 - 19.0%
Total Liabilities	50.4%	36.2 - 67.8%
Total Net Worth	49.6%	32.3 - 63.8%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

WDA REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	2.9%	-10.4 - 4.8%
Total Assets to Net Worth	2.0X	1.5 - 4.0X
Net Profit After Tax to Total Assets	1.3%	-2.7 - 2.5%
Net Sales to Total Assets	2.4X	2.0 - 2.6X
Net Profit After Tax to Net Sales	0.6%	-1.2 - 1.1%
Net Profit Before Tax to Net Worth	3.5%	-8.5 - 7.4%
Net Profit Before Tax to Total Assets	1.9%	-1.8 - 3.9%
EBIT to Total Assets	4.1%	0.3 - 6.6%
SALES ANALYSIS		
Net Sales($000)	$4,504	$2,163 - 8,483
Percent Sales Change from Prior Year	-2.3%	-12.3 - 0.5%
Sales Mix:		
Direct Sales	5.5%	1.4 - 8.8%
Warehouse Sales - Counter and Delivery	94.6%	91.2 - 98.7%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	72.8%	50.0 - 95.8%
Heating & Cooling Supplies & Equipment	6.0%	0.0 - 7.3%
Industrial P-V-F (Pipes-Valves-Fittings)	13.1%	0.0 - 8.8%
Other Industrial Supplies & Equipment	1.9%	0.0 - 0.0%
Other Products	6.3%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.7%	22.0 - 28.7%
Gross Margin on Direct Shipments	11.5%	8.9 - 13.2%
Gross Margin on Warehouse Sales	26.1%	21.0 - 28.5%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.76X	2.30 - 3.17X
Total Debt to Net Worth	109.9%	50.5 - 322.3%
Current Debt to Net Worth	88.4%	41.5 - 207.2%
Current Assets to Current Debt	2.31X	1.68 - 3.36X
Current Assets Minus Inventory/Curr Debt	0.96X	0.67 - 1.75X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.1	4.3 - 6.0
Average Invoice Size	$112	$95 - 205
Average Billing Line	$24.78	$15.70 - 37.02

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

WDA REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$167,044	$132,226 - 186,176
Gross Margin Per Employee	$38,814	$36,992 - 48,137
Average Compensation Per Employee	$22,186	$18,671 - 24,481
Average Fringe Benefits Per Employee	$3,394	$2,758 - 4,748
Compensation & Fringes Per Employee	$25,714	$22,378 - 28,244
Payroll to Net Sales	12.8%	11.7 - 16.2%
Fringe Benefits to Net Sales	2.3%	1.6 - 2.6%
Payroll & Fringes to Net Sales	13.2%	0.0 - 17.4%
Payroll to Gross Margin	52.9%	43.8 - 59.8%
Fringe Benefits to Gross Margin	8.6%	7.5 - 9.7%
Payroll & Fringes to Gross Margin	52.9%	0.0 - 64.7%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.35X	3.00 - 3.69X
% of Whse Sales from Non-Stock Items	10.0%	6.5 - 18.5%
Cost of In-Stock Whse Sales/Ave Inventory	2.85X	2.21 - 3.18X
No. of Days Average Inventory Carried	109 Days	99 - 122 Days
Total Cost of Goods Sold to Ave Inventory	3.53X	3.05 - 4.75X
Whse Gross Margin Return on Ave Inventory	119%	89 - 133%
Turn & Earn Profitability Index	86%	65 - 103%
Percent of Firms on LIFO	60.0%	
ACCOUNTS RECEIVABLE		
Average Collection Period	51 Days	45 - 58 Days
Gross Margin Return on Receivables	189%	151 - 215%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	68.0%	59.9 - 77.6%
31-60 Days Outstanding	15.2%	10.2 - 20.6%
61-90 Days Outstanding	5.2%	3.2 - 8.0%
Over 90 Days Outstanding	11.6%	4.6 - 16.5%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$993	$580 - 1,974
31-60 Days Outstanding	$1,012	$737 - 1,678
61-90 Days Outstanding	$901	$720 - 1,652
Over 90 Days Outstanding	$1,034	$719 - 2,022
Total	$1,063	$638 - 2,037
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	71.5%	64.3 - 81.7%
31-60 Days Outstanding	14.9%	11.1 - 17.9%
61-90 Days Outstanding	5.7%	3.3 - 7.9%
Over 90 Days Outstanding	8.0%	4.9 - 11.0%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

WDA REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	73.3%	71.3 - 78.0%
Gross Margin	26.7%	22.0 - 28.7%
Operating Expenses:		
Selling Expenses	7.0%	4.2 - 8.3%
Delivery Expenses	2.7%	1.6 - 3.5%
Warehouse Expenses	3.2%	2.1 - 3.5%
General & Administrative Expenses	10.9%	7.7 - 13.7%
Occupancy Expenses	2.8%	1.8 - 3.6%
Other Operating Expenses	1.2%	0.0 - 1.6%
Total Operating Expenses	27.7%	22.6 - 30.4%
Net Operating Profit	-1.0%	-1.1 - 1.5%
Non-Operating Income	1.7%	0.8 - 2.5%
Non-Operating Expenses	2.5%	0.7 - 2.8%
Net Profit Before Tax	-1.8%	-2.1 - 1.3%
Net Profit After Tax	0.6%	-1.2 - 1.1%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	27.7%	22.6 - 30.4%
Total Operating Expense to Gross Margin	105.7%	94.2 - 104.0%
Non-People Expense to Net Sales	12.6%	8.9 - 15.0%
Non-People Expense to Gross Margin	47.3%	37.8 - 51.7%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.1%	0.4 - 2.1%
Times Interest Earned	1.6X	0.1 - 3.2X
BALANCE SHEET		
Cash	4.5%	0.4 - 4.7%
Accounts & Notes Receivable, Trade(Net)	30.6%	24.5 - 33.1%
Inventory	47.5%	39.0 - 56.2%
Other Current Assets	2.4%	0.2 - 2.4%
Total Current Assets	84.9%	78.3 - 94.6%
All Other Assets	15.1%	5.4 - 21.7%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	37.8%	23.8 - 50.2%
Total Long-Term Liabilities	16.3%	0.3 - 25.4%
Total Liabilities	54.1%	33.2 - 75.6%
Total Net Worth	45.9%	24.4 - 66.8%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

WSA REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	6.5%	2.2 - 14.4%
Total Assets to Net Worth	1.8X	1.5 - 2.2X
Net Profit After Tax to Total Assets	4.2%	0.7 - 7.5%
Net Sales to Total Assets	2.5X	2.3 - 3.0X
Net Profit After Tax to Net Sales	1.6%	0.3 - 3.0%
Net Profit Before Tax to Net Worth	7.8%	2.2 - 25.3%
Net Profit Before Tax to Total Assets	5.1%	0.7 - 12.5%
EBIT to Total Assets	5.6%	3.0 - 14.6%
SALES ANALYSIS		
Net Sales($000)	$4,874	$2,910 - 17,438
Percent Sales Change from Prior Year	6.6%	-1.0 - 14.7%
Sales Mix:		
Direct Sales	10.1%	3.2 - 18.8%
Warehouse Sales - Counter and Delivery	89.9%	81.2 - 96.8%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	48.8%	20.0 - 78.8%
Heating & Cooling Supplies & Equipment	7.4%	0.0 - 5.0%
Industrial P-V-F (Pipes-Valves-Fittings)	24.6%	1.3 - 43.8%
Other Industrial Supplies & Equipment	5.2%	0.0 - 5.0%
Other Products	14.1%	0.0 - 23.3%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.3%	22.5 - 26.6%
Gross Margin on Direct Shipments	10.9%	8.8 - 12.5%
Gross Margin on Warehouse Sales	26.0%	23.4 - 27.5%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.00X	2.49 - 3.36X
Total Debt to Net Worth	80.6%	50.1 - 116.9%
Current Debt to Net Worth	56.6%	32.5 - 100.1%
Current Assets to Current Debt	2.73X	2.09 - 4.03X
Current Assets Minus Inventory/Curr Debt	1.15X	0.80 - 1.64X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.5	4.7 - 8.0
Average Invoice Size	$294	$210 - 348
Average Billing Line	$45.30	$32.09 - 63.61

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

WSA REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$239,937	$202,790 - 280,381
Gross Margin Per Employee	$57,092	$50,064 - 73,321
Average Compensation Per Employee	$28,182	$24,583 - 30,544
Average Fringe Benefits Per Employee	$5,878	$4,496 - 8,094
Compensation & Fringes Per Employee	$33,882	$30,407 - 37,024
Payroll to Net Sales	11.6%	10.5 - 13.8%
Fringe Benefits to Net Sales	2.6%	2.1 - 3.3%
Payroll & Fringes to Net Sales	12.9%	10.7 - 17.9%
Payroll to Gross Margin	50.2%	41.7 - 53.9%
Fringe Benefits to Gross Margin	10.9%	9.3 - 13.9%
Payroll & Fringes to Gross Margin	57.9%	43.9 - 69.5%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.25X	2.61 - 3.84X
% of Whse Sales from Non-Stock Items	6.5%	2.8 - 15.1%
Cost of In-Stock Whse Sales/Ave Inventory	3.07X	2.40 - 3.25X
No. of Days Average Inventory Carried	112 Days	95 - 140 Days
Total Cost of Goods Sold to Ave Inventory	3.86X	3.16 - 5.17X
Whse Gross Margin Return on Ave Inventory	118%	94 - 143%
Turn & Earn Profitability Index	89%	68 - 102%
Percent of Firms on LIFO	66.7%	
ACCOUNTS RECEIVABLE		
Average Collection Period	43 Days	41 - 46 Days
Gross Margin Return on Receivables	206%	168 - 232%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	66.9%	58.7 - 73.8%
31-60 Days Outstanding	17.3%	14.7 - 18.4%
61-90 Days Outstanding	7.1%	5.1 - 7.6%
Over 90 Days Outstanding	8.8%	2.8 - 14.0%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,629	$1,080 - 2,482
31-60 Days Outstanding	$1,107	$759 - 2,279
61-90 Days Outstanding	$1,574	$942 - 2,312
Over 90 Days Outstanding	$1,283	$710 - 2,825
Total	$1,418	$1,251 - 2,187
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	60.9%	52.3 - 72.2%
31-60 Days Outstanding	22.9%	16.7 - 27.4%
61-90 Days Outstanding	8.2%	5.6 - 10.9%
Over 90 Days Outstanding	8.0%	3.2 - 11.2%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

WSA REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.7%	73.4 - 77.5%
Gross Margin	24.3%	22.5 - 26.6%
Operating Expenses:		
Selling Expenses	6.7%	4.8 - 8.0%
Delivery Expenses	1.6%	0.9 - 1.8%
Warehouse Expenses	2.4%	1.7 - 2.9%
General & Administrative Expenses	8.7%	7.9 - 9.8%
Occupancy Expenses	2.6%	1.3 - 3.5%
Other Operating Expenses	0.4%	0.0 - 0.1%
Total Operating Expenses	22.4%	19.4 - 25.4%
Net Operating Profit	1.9%	0.3 - 4.3%
Non-Operating Income	1.7%	1.1 - 2.2%
Non-Operating Expenses	1.9%	1.1 - 2.5%
Net Profit Before Tax	1.6%	0.2 - 4.5%
Net Profit After Tax	1.6%	0.3 - 3.0%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.4%	19.4 - 25.4%
Total Operating Expense to Gross Margin	92.9%	82.2 - 98.9%
Non-People Expense to Net Sales	7.6%	7.2 - 8.9%
Non-People Expense to Gross Margin	32.0%	28.6 - 37.1%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.3 - 1.3%
Times Interest Earned	3.8X	1.2 - 7.2X
BALANCE SHEET		
Cash	5.0%	1.3 - 5.3%
Accounts & Notes Receivable, Trade(Net)	33.1%	25.2 - 38.4%
Inventory	49.1%	44.7 - 60.5%
Other Current Assets	1.8%	0.2 - 2.2%
Total Current Assets	88.9%	85.9 - 94.2%
All Other Assets	10.7%	5.8 - 13.0%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	33.7%	20.7 - 44.3%
Total Long-Term Liabilities	10.8%	2.2 - 15.8%
Total Liabilities	44.5%	33.3 - 53.8%
Total Net Worth	55.5%	46.1 - 66.7%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PSDA REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE		
Net Profit After Tax to Net Worth	7.9%	2.2 - 19.6%
Total Assets to Net Worth	3.0X	2.4 - 7.8X
Net Profit After Tax to Total Assets	2.9%	1.2 - 6.8%
Net Sales to Total Assets	3.1X	2.6 - 3.4X
Net Profit After Tax to Net Sales	0.9%	0.3 - 2.3%
Net Profit Before Tax to Net Worth	12.9%	8.4 - 27.9%
Net Profit Before Tax to Total Assets	4.7%	1.5 - 7.2%
EBIT to Total Assets	7.4%	5.6 - 10.4%
SALES ANALYSIS		
Net Sales($000)	$6,340	$3,220 - 28,266
Percent Sales Change from Prior Year	19.5%	15.1 - 24.7%
Sales Mix:		
Direct Sales	5.3%	
Warehouse Sales - Counter and Delivery	94.7%	
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	60.2%	40.0 - 88.0%
Heating & Cooling Supplies & Equipment	3.0%	0.0 - 2.0%
Industrial P-V-F (Pipes-Valves-Fittings)	27.2%	0.0 - 25.0%
Other Industrial Supplies & Equipment	3.9%	0.0 - 0.0%
Other Products	5.7%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	23.3%	20.0 - 24.2%
Gross Margin on Direct Shipments	10.5%	
Gross Margin on Warehouse Sales	22.9%	
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.54X	2.93 - 3.82X
Total Debt to Net Worth	201.7%	139.9 - 678.6%
Current Debt to Net Worth	184.0%	105.6 - 364.8%
Current Assets to Current Debt	1.76X	1.36 - 2.29X
Current Assets Minus Inventory/Curr Debt	0.83X	0.61 - 1.27X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	5.8 - 7.2
Average Invoice Size	$153	$91 - 291
Average Billing Line	$27.83	$14.61 - 46.21

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PSDA REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$243,835	$177,645 - 275,021
Gross Margin Per Employee	$52,746	$46,288 - 64,612
Average Compensation Per Employee	$27,157	$23,625 - 29,132
Average Fringe Benefits Per Employee	$4,670	
Compensation & Fringes Per Employee	$31,124	$23,817 - 34,394
Payroll to Net Sales	10.3%	9.1 - 11.7%
Fringe Benefits to Net Sales	2.0%	
Payroll & Fringes to Net Sales	11.3%	10.4 - 13.7%
Payroll to Gross Margin	46.5%	43.3 - 49.3%
Fringe Benefits to Gross Margin	9.6%	
Payroll & Fringes to Gross Margin	55.4%	41.2 - 58.0%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	5.20X	
% of Whse Sales from Non-Stock Items	12.0%	
Cost of In-Stock Whse Sales/Ave Inventory	4.68X	
No. of Days Average Inventory Carried	70 Days	
Total Cost of Goods Sold to Ave Inventory	6.01X	4.49 - 6.87X
Whse Gross Margin Return on Ave Inventory	145%	
Turn & Earn Profitability Index	111%	
Percent of Firms on LIFO	22.2%	
ACCOUNTS RECEIVABLE		
Average Collection Period	51 Days	50 - 59 Days
Gross Margin Return on Receivables	150%	128 - 182%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	72.7%	62.0 - 87.7%
31-60 Days Outstanding	16.0%	5.4 - 24.4%
61-90 Days Outstanding	5.3%	1.7 - 7.4%
Over 90 Days Outstanding	6.0%	3.7 - 6.3%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$2,926	
31-60 Days Outstanding	$1,471	
61-90 Days Outstanding	$1,683	
Over 90 Days Outstanding	$2,025	
Total	$2,789	
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	69.2%	
31-60 Days Outstanding	16.7%	
61-90 Days Outstanding	6.4%	
Over 90 Days Outstanding	7.7%	
Total	100.0%	

AMERICAN SUPPLY ASSOCIATION 1988 OPERATING PERFORMANCE SURVEY

PSDA REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	76.7%	75.8 - 80.0%
Gross Margin	23.3%	20.0 - 24.2%
Operating Expenses:		
Selling Expenses	4.7%	3.5 - 5.6%
Delivery Expenses	2.0%	1.6 - 2.6%
Warehouse Expenses	4.1%	2.1 - 5.3%
General & Administrative Expenses	8.1%	6.5 - 10.6%
Occupancy Expenses	1.9%	1.6 - 2.4%
Other Operating Expenses	0.3%	0.0 - 0.2%
Total Operating Expenses	21.1%	18.7 - 23.0%
Net Operating Profit	2.1%	0.9 - 3.2%
Non-Operating Income	0.8%	0.1 - 1.1%
Non-Operating Expenses	1.5%	0.7 - 2.4%
Net Profit Before Tax	1.4%	0.5 - 2.2%
Net Profit After Tax	0.9%	0.3 - 2.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	21.1%	18.7 - 23.0%
Total Operating Expense to Gross Margin	90.9%	85.9 - 95.4%
Non-People Expense to Net Sales	8.0%	
Non-People Expense to Gross Margin	35.2%	
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.7 - 1.0%
Times Interest Earned	2.3X	1.5 - 3.3X
BALANCE SHEET		
Cash	2.9%	0.4 - 1.2%
Accounts & Notes Receivable, Trade(Net)	41.5%	34.3 - 44.8%
Inventory	42.2%	30.9 - 48.8%
Other Current Assets	1.2%	0.6 - 1.8%
Total Current Assets	87.8%	82.7 - 91.6%
All Other Assets	12.2%	8.4 - 17.3%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	49.9%	40.7 - 59.9%
Total Long-Term Liabilities	26.9%	10.9 - 53.4%
Total Liabilities	76.8%	58.7 - 94.1%
Total Net Worth	23.2%	5.9 - 41.3%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

APPENDIX

Survey Methodology/Demographics

In late February, 1988, the American Supply Association mailed strictly confidential questionnaires to all P-H-C-P wholesale members. The primary intent of this survey was to collect detailed financial and operating information from member firms by specific geographic region, sales volume size and type of product emphasis.

Once the questionnaires were received by Industry Insights, all company identification, if any, was removed and a confidential company identification code assigned. The data was then coded, keyed into the computer and edited by Industry Insights financial analysts for accuracy and consistency. Computer processing was performed on all data to insure statistical validity and to produce the financial and operating ratios contained in this study.

In all, 327 completed and usable questionnaires were received by Industry Insights representing well over 1,000 different wholesaler locations (including headquarters). In particular, the statistical sample consists of the following:

	Number of Reporting Firms
All Reporting Firms	327
By Product Emphasis	
Plumbing Supplies & Equipment Firms (those that obtain more than 50% of sales from plumbing products)	171
Industrial Pipe, Valves and Fittings Firms (those with more than 50% of sales from Industrial P-V-F)	44
Plumbing Supplies and Industrial Pipe, Valves and Fittings Firms (those with more than 50% of sales from plumbing and Industrial P-V-F products combined but less than 50% in each category alone)	37
HVAC and Other Emphasis Firms (those companies that cannot be classified in any of the three above groups; or, those firms with less than 50% of sales in combined plumbing supplies and equipment, and Industrial P-V-F products)	74
Product Emphasis Not Specified	1
By Product Emphasis and Sales Volume Size	
Plumbing Supplies & Equipment Firms:	
Sales Under $3,000,000	41
Sales $3,000,000 to $7,000,000	51

Sales $7,000,000 to $12,000,000 34
Sales Over $12,000,000 44
Sales Volume Not Specified 1

Industrial Pipe, Valves and Fittings Firms:
Sales Under $4,000,000 10
Sales $4,000,000 to $12,000,000 16
Sales Over $12,000,000 18

Plumbing Supplies and Industrial Pipe, Valves and Fittings Firms:
Sales Under $3,000,000 7
Sales $3,000,000 to $7,000,000 11
Sales Over $7,000,000 19

HVAC & Other Emphasis Firms:
Sales Under $3,000,000 11
Sales $3,000,000 to $8,000,000 31
Sales Over $8,000,000 31
Sales Volume Not Specified 1

By Regional Association Affiliation

PHWNE (CT, ME, MA, NH, RI, VT) 33
NYSPHW (NY, Excluding New York City) 17
JCA (Long Island and Metro New York) 5
MAWA (DE, E. PA, MD, NJ, DC) 34
CWA (IN, OH, W. PA, WV) 52
SWA (AL, FL, GA, KY, MS, NC, SC, TN, VA) 35
MAD (MI, excluding Upper MI) 20
Metro Chicago, Northern IL 7
MASA (IA, KS, MN, MO, NE, ND, SD, Upper MI, WI, Southern IL) 46
WDA (LA, TX, NM, OK, AR, CO) 42
WSA (ID, MT, WY, AK, OR, WA, HI, Northern CA, Northern NV) 24
PSDA (AZ, Southern CA, Southern NV, UT) 9
Region Not Specified 3

The statistical information contained in this report is believed to be representative of the companies responding to the survey. All reasonable efforts were taken by Industry Insights, Inc. to assure data comparability within the limitations of accounting reporting procedures. However, the data used in this report are not necessarily based on audited financial statements and the statistical validity of any given number varies depending upon sample sizes and the amount of consistency among responses for that particular ratio. Industry Insights, therefore, makes no representations or warranties with respect to the results of this study and shall not be liable to clients or anyone else for any information inaccuracies, or errors or omissions in contents, regardless of the cause of such inaccuracy, error or omission. In no event shall Industry Insights be liable for any consequential damages.

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Fiscal Year-Ends

Among the participants in each year's **Operating Performance Report** it is somewhat interesting to take note of the patterns of fiscal year-end dates. The table below shows that of the firms responding to the 1988 ASA survey, nearly 60% reported that their fiscal year follows the calendar year. This was an increase from that reported during the prior year's survey, probably reflecting some fiscal year shifts that have occurred due to the new tax laws. Among the 40.2% of firms having non-December fiscal year ends, the majority fell during either the three months before or the three months after December.

Month of Fiscal Year-Ends

Month	Percentage of Companies
January	6.2
February	6.5
March	6.9
April	2.5
May	1.3
June	2.8
July	0.6
August	1.3
September	3.7
October	5.3
November	3.1
December	59.8
Total	100.0

Ratio Definitions and Sample Calculations

A primary purpose of this ASA **Operating Performance Report** of the P-H-C-P Wholesaler/Distributor and P-V-F Distributing industries is to provide a basis for comparing your own firm's performance with industry comparatives. In order to do this, it is necessary to calculate your firm's individual company ratios using the same methods that were used to compute the ratios in this report. These definitions appear on the pages which follow.

To further clarify the computational process, this section of the report also contains a completed survey form and sample calculations for a purely hypothetical company.

Note: Those firms that participated in the ASA survey received, absolutely free, a confidential Company Performance Report. This report presents a company's own ratios and data already computed in a manner consistent with those appearing in the industry report, and displayed alongside the appropriate industry comparatives. As a result, participating companies received invaluable information about their own business performance without having to spend time and effort to make the calculations manually.

Ratio Definitions and Sample Calculations

Performance Measure	Method of Computation () Indicates Survey Line #	Computational Example: Sample Co.	Suggested Uses
Overall Performance			
• Net Profit After Tax to Net Worth (%)	(16) Net Profit After Tax ÷ (27) Net Worth	$69,815 ÷ 1,072,599 = 6.5%	Overall financial performance from the owner's standpoint.
• Total Assets to Net Worth (X)	(23) Total Assets ÷ (27) Net Worth	$2,369,891 ÷ 1,072,599 = 2.2x	Setting policies concerning amount of debt vs. equity in the business.
• Net Profit After Tax to Total Assets (%)	(16) Net Profit After Tax ÷ (23) Total Assets	$69,815 ÷ 2,369,891 = 2.9%	Overall financial performance from a management standpoint.
• Net Sales to Total Assets (X)	(1) Net Sales ÷ (23) Total Assets	$5,884,780 ÷ 2,369,891 = 2.5x	Asset management--productivity of total asset base.
• Net Profit After Tax to Net Sales (%)	(16) Net Profit After Tax ÷ (1) Net Sales	$69,815 ÷ 5,884,780 = 1.2%	Margin management (gross margin and expenses)
• Net Profit Before Tax to Total Assets (%)	(14) Net Profit Before Tax ÷ (23) Total Assets	$114,136 ÷ 2,369,891 = 4.8%	Overall financial performance from a management standpoint ignoring tax considerations.
• EBIT* to Total Assets (%)	[(14) Net Profit Before Tax + (48) Interest] ÷ (23) Total Assets	[$114,136 +13,092] ÷ 2,369,891 = 5.4%	Same as previous ratio but ignores interest expense (leverage, not operations related)
Sales Analysis			
• Percent Sales Change from prior year	[(1) Net Sales - (39) Previous Years Sales] ÷ (39) Previous Years Sales	[$5,884,780 - 6,002,478] ÷ 6,002,478 = (2.0)	Indication of company growth. Caution should be used due to inflationary distortions.
Asset and Financial Management			
• Current Asset Turn (X)	(1) Net Sales ÷ (21) Total Current Assets	$5,884,780 ÷ 2,258,150 = 2.6x	Asset management - productivity of current asset base.
• Total Debt to Net Worth (%)	(26) Total Liabilities ÷ (27) Net Worth	$1,297,292 ÷ 1,072,599 = 120.9%	Measures overall leverage. Use to set policy of how much debt is employed relative to owner's funds.
• Current Debt to Net Worth (%)	(24) Current Liabilities ÷ (27) Net Worth	$520,042 ÷ 1,072,599 = 48.5%	A measure of the financial mix of the firm.
• Current Assets to Current Debt (x)	(21) Total Current Assets ÷ (24) Total Current Liabilities	$2,258,150 ÷ 520,042 = 4.3X	Good overall measures of liquidity. Used to stay within guides set by suppliers and creditors.
• Current Assets Less Inventory to Current Debt (X)	[(21) Total Current Assets - (19) Inventory] ÷ (24) Total Current Liabilities	[$2,258,150 - 983,840] ÷ 520,042 = 2.5x	Same as above ratio.
Transaction Data			
• Billing Lines Per Invoice	(45) Annual Billing Lines ÷ (44) Total No. Invoices	171,872 ÷ 21,484 = 8	Gives some indication of invoicing efficiency.
• Average Invoice Size ($)	(1)Net Sales ÷ (44) Total No. Invoices	$5,884,780 X .83 ÷ 21,484 = $227.35	Indicates the typical size of an invoice and thus add-on purchase efficiency.
• Average Billing Line ($)	(1)Net Sales ÷ (45) Annual Billing Lines	$5,884,780 X .83 ÷ 171,872 = $28.42	Indicates the size of a typical item billed.
Personnel Productivity			
• Payroll to Net Sales (%)	(29) Total Payroll Expenses ÷ (1) Net Sales	$604,313 ÷ 5,884,780 = 10.3%	Overall indicator of payroll cost control. Inflation proof. Compare: overtime; vs. industry; by store.
• Fringe Benefits to Net Sales (%)	(30) Total Fringe & Payroll Taxes ÷ (1) Net Sales	$234,303 ÷ 5,884,780 = 4.0%	Indicates how much of sales are paid in fringe benefits. Compare: overtime; vs. industry.
• Payroll and Fringes to Net Sales (%)	[(29) Payroll Expense + (30) Fringe Benefits] ÷ (1) Net Sales	[$604,313 + 234,303] ÷ 5,884,780 = 14.3%	Indicator of all personnel related costs.

*EBIT refers to "Earnings Before Interest and Taxes."

Ratio Definitions and Sample Calculations

Performance Measure	Method of Computation () Indicates Survey Line #	Computational Example: Sample Co.	Suggested Uses
Personnel Productivity (cont)			
• Payroll to Gross Margin (%)	(29) Total Payroll Expense ÷ (3) Gross Profit on Sales	$604,313 ÷ 1,492,481 = 40.5%	Indicates the portion of gross profits that are used in payroll costs.
• Fringe Benefits to Gross Margin (%)	(30) Total Fringe Benefits ÷ (3) Gross Profit on Sales	$234,303 ÷ 1,492,481 = 15.7%	Same as above but relative to fringe benefits.
• Payroll and Fringes to Gross Margin (%)	[(29) Total Payroll + (30) Total Fringes] ÷ (3) Gross Profit on Sales	[$604,313 + 234,303] ÷ 1,492,481 = 56.2%	Indicator of all personnel related costs that are used in gross margin production.
Inventory Management			
• Cost of Whse Goods Sold to Average Inventory (x)	[(34) Total Whse Sales - (37) Whse Gross Profit] ÷ [((19) Inventory + (40) Previous Years Inventory) ÷ 2]	[$5,240,136 - 1,396,217] ÷ [(983,840 + 992,313) ÷ 2] = 3.9x	Measure of inventory productivity. Compare to industry, over time or product categories.
• No. of Days Average Inventory Carried	[((19) Inventory + (40) Previous Years Inventory) ÷ 2] ÷ [((34) Whse Sales-(37) Whse Gross Profit) ÷ 365]	[($983,840 + 992,313) ÷ 2] ÷ [(5,240,136-1,396,217) ÷ 365] = 94 days	Similar in value to above measure. Shows how quickly inventory is moving.
• Total Cost of Goods Sold to Average Inventory (x)	(2) Total Cost of Goods Sold ÷ [(19) Inventory + (40) Previous Years Inventory) ÷ 2]	$4,392,299 ÷ [(983,840 + 992,313) ÷ 2] = 4.4x	Shows how many times you were able to "turn over" your inventory.
• Whse Gross Margin Return on Average Inventory (%)	(37) Whse Gross Profit ÷ [((19) Inventory + (40) Previous Years Inventory) ÷ 2]	$1,396,217 ÷ [(983,840 + 992,313) ÷ 2] = 141.3%	Overall measure of inventory, profitability and productivity. Combines margin and turnover.
• Turn & Earn Profitability Index (%)	[((34) Whse Sales-(37) Whse Gross Profit) ÷ ((19) Inventory + (40) Previous Years Inventory) ÷ 2] X [((37) Whse Gross Profit ÷ (34) Whse Sales) X 100]	[($5,240,136 - 139,217) ÷ (983,840 + 992,313) ÷ 2] X [(1,396,217 ÷ 5,240,136) X 100] = 103.9	Another return-on-investment measure which combines margin and turnover.
Accounts Receivable			
• Average Collection Period	(18) Accounts & Notes Receivable (Net) ÷ [(1) Net Sales X (1.0 - (44) % Cash Sales) ÷ 365]	1,096,734 ÷ [5,884,780 X (1.0 - .17) ÷ 365] = 82 days	Measuring effectiveness of various collection policies. Compare to industry and over time.
• Gross Margin Return on Receivables (%)	[((3) Gross Profit ÷ (1) Net Sales) X 100] X [365 ÷ Average Collection Period]	[(1,492,481 ÷ 5,884,780) X 100] X [365 ÷ 82] = 112.9%	Indicator of how much gross margin dollars are being generated on your accounts receivables.
Operating Expense Control			
• Total Operating Expense to Net Sales (%)	(10) Total Operating Expense ÷ (1) Net Sales	$1,323,621 ÷ 5,884,780 = 22.5%	Conventional measure used for controlling total operating costs.
• Total Operating Expense to Gross Margin (%)	(10) Total Operating Expense ÷ (3) Gross Profit	$1,323,621 ÷ 1,492,481 = 88.7%	A somewhat more specific measure than the one above.
• Non-People Expense to Net Sales (%)	[(10) Total Operaging Expense - ((29) Payroll + (30) Fringes)] ÷ (1) Net Sales	[$1,323,621 - (604,313 + 234,303)] ÷ 5,884,780 = 8.2%	A measure for controlling all operating costs except personnel costs.
• Non-People Expense to Gross Margin (%)	[(10) Total Operating Expense - ((29) Payroll + (30) Fringes)] ÷ (3) Gross Profit	[$1,323,621 - (604,313 + 234,303)] ÷ 1,492,481 = 32.5	Same as above but somewhat finer.
Interest Expense			
• Interest Expense to Net Sales (%)	(46) Interest Expense ÷ (1) Net Sales	$13,092 ÷ 5,884,780 = 0.2%	An indicator of how much debt financing is costing the firm relative to sales.
• Times Interest Earned (%)	[(14) Net Profit Before Taxes + (46) Interest] ÷ (46) Interest	[$114,136 + 13,092] ÷ 13,092 = 9.7x	Indicates the ease in which your company can pay interest costs out of earnings.

AMERICAN SUPPLY ASSOCIATION
1988 ANNUAL OPERATING PERFORMANCE SURVEY
(Based on 1987 Financial Results)

INFORMATION AND INSTRUCTIONS FOR PARTICIPANTS

With your help, the 1988 ASA Operating Performance Survey (of 1987 financial information) promises to be the best ever, and the easiest in which to participate. For the second consecutive year, you have the option of filling out either the same comprehensive survey form that has been used in the past, or a shorter, less detailed portion of the form. By filling out as much of the information as you can on the form, you will be assured of receiving a detailed confidential analysis report of your business. However, if you are simply unable to fill out the entire form, you can still participate and receive a confidential analysis of your business by filling out as much information as possible on the form and by omitting the entire last page.

GENERAL SUGGESTIONS AND INSTRUCTIONS

To participate and receive free analytical information about your firm, please follow the guidelines below:

1. Determine whether you wish to fill out the entire form, or the shorter version of the form (i.e., with the last page of information excluded).

2. Enter figures from your completed fiscal year which ended nearest to December 31, 1987. Full year data is required. Financial data need not be audited.

3. Dollar amounts should be rounded to the nearest dollar. Eliminate "cents." Columns labeled "Code #" are for internal use only and should be ignored.

4. Please report on the basis of your total firm rather than for individual branches.

5. Refer to the accompanying "Description of Operating Expenses Categories" for help in filling out lines 4 through 10.

6. **IT IS NOT NECESSARY TO FILL OUT EVERY LINE IF YOU DO NOT HAVE IT.**

7. If you prefer, just fill in the information that you readily know and forward your "Income Statement and Balance Sheet" financials (or your most recent annual "Income Tax Form") for your latest available 12 month period along with a copy of the survey form.

8. Send your response in the enclosed postage-paid, self-addressed envelope to:

   Industry Insights, Inc., PO Box 20127, Columbus, Ohio 43220-0127

9. **THE DEADLINE DATE FOR PARTICIPATING IS APRIL 15, 1988.**

10. If you have any questions, contact Industry Insights, Inc. at (614) 442-6626.

PARTICIPATE NOW AND RECEIVE INVALUABLE CONFIDENTIAL ANALYSIS INFORMATION ABOUT YOUR COMPANY. YOUR CONFIDENTIAL REPORT WILL BE IN YOUR HANDS BY THE END OF MAY.

CONFIDENTIAL

CODE NUMBER 500

AMERICAN SUPPLY ASSOCIATION
1988 ANNUAL OPERATING PERFORMANCE SURVEY
(Based on 1987 Financial Results)

CLASSIFICATION DATA

Ending 12 month period upon which data is based (1) 12/31/87 month/day/year

Number of locations (including headquarters) which are included in the data reflected on this Survey Form. (Do not submit separate forms for branches.) (2) 1

REGIONAL IDENTIFICATION: (Check (✓) only one of the boxes below:

		Territory	Regional Association Affiliate
	1)	☐ CT, ME, MA, NH, RI, VT	PHWNE
	2)	☐ NY (excluding NYC)	NYSPHW
	3)	☐ Long Island and Metro NY	JCA
	4)	☐ DE, E.PA, MD, NJ, Wa.DC	MAWA
	5)	☒ IN, OH, W.PA, WV	CWA
	6)	☐ AL, FL, GA, KY, MS, NC, SC, TN, VA	SWA
	7)	☐ Michigan (excluding upper MI)	MAD
(3)	8)	☐ Metro Chicago, Northern IL	
	9)	☐ IA, KS, MN, MO, NE, ND, SD, Upper MI, WI, Southern IL	MASA
	10)	☐ LA, TX, NM, OK, AR, CO	WDA
	11)	☐ Rocky Mountain (ID, MT, WY)	
		Pacific NW (AK, OR, WA) HI, N.CA, N.NV	WSA
	14)	☐ AZ, S.CA, S.NV, UT	PSDA

PRODUCT SALES MIX - Please indicate the percentage of your total company sales accounted for by each type of product (estimate if necessary)

(4)	30	Plumbing Supplies & Equipment, Including Plumbing Pipe, Valves & Fittings
(5)		Hydronic & Warm Air Heating & Air Conditioning Supplies & Equipment
(6)	30	Industrial P-V-F (Industrial Pipe, Valves & Fittings)
(7)	30	Other Industrial Supplies & Equipment
(8)	10	Other (Please specify:)
(9)	100%	TOTAL

Indicate below to whom any questions regarding this Form should be directed and to whom the final report should be sent. Industry Insights will detach this coupon upon receipt to assure confidentiality.

Name (Questions) _____ Phone ( ) _____

Name (Report) Sample Company

Company _____

City, State, Zip _____

CODE NUMBER 500

INCOME STATEMENT ITEMS

Line #		Code #	AMOUNT IN $ (omit cents)
1	Net Sales (Include direct shipments. Deduct claims, returns & allowances but not cash discounts allowed on sales. Exclude sales Taxes.)	(10)	$ 5,884,780
2	Cost of Goods Sold (Include inbound transportation costs. Subtract purchase claims, returns and allowances but not cash discounts on purchases) (FIFO basis)*.	(11)	$ 4,392,299
3	Gross Profit on Sales (Line 1 minus Line 2) (FIFO Basis)	(12)	$ 1,492,481
4	Selling Expenses (refer to definition sheet)	(13)	$ 280,652
5	Delivery Expenses (refer to definition sheet)	(14)	$ 177,206
6	Warehouse Expenses (refer to definition sheet)	(15)	$ 197,090
7	General & Administrative Expenses (refer to definition sheet)	(16)	$ 562,999
8	Occupancy Expenses (refer to definition sheet)	(17)	$ 74,396
9	Other Operating Expenses (refer to definition sheet)	(18)	$ 31,278
10	Total Operating Expenses (Sum of Lines 4 through 9)***	(19)	$ 1,323,621
11	Net Operating Profit (Line 3 minus Line 10) (FIFO)	(20)	$ 168,860
12	Non-Operating Income (Include cash discounts on purchases, interest earned and other income items not directly related to the primary operations of the business)	(21)	$ 34,838
13	Non-Operating Expenses (Include cash discounts allowed on sales, interest paid, losses on sales of fixed assets, and other non-operating expenses or losses not already included above)	(22)	$ 89,562
14	Net Profit Before Taxes (Line 11 plus Line 12 minus Line 13) (FIFO)	(23)	$ 114,136
15	Income Taxes (Federal, State & City)	(24)	$ 44,321
16	Net Profit After Income Taxes (Line 14 minus Line 15) (FIFO)	(25)	$ 69,815

BALANCE SHEET ITEMS

17	Cash (Include savings accounts, CD's & other temporary investments)	(26)	$ 159,182
18	Accounts & Notes Receivable, Trade (Net)	(27)	$ 1,096,734
19	Inventory (FIFO Basis)	(28)	$ 983,840
20	Other Current Assets (Such as prepaid items, supplies, etc.)	(29)	$ 18,394
21	Total Current Assets (Sum of Lines 17 thru 20)	(30)	$ 2,258,150
22	All Other Assets (Any Assets not included above)	(31)	$ 111,740
23	Total Assets (Sum of Lines 21 and 22) (Equal to Line 28) (FIFO)	(32)	$ 2,369,891
24	Total Current Liabilities (Due in less than 1 year)	(33)	$ 520,042
25	Total Long-Term Liabilities (Due in more than 1 year)	(34)	$ 777,250
26	Total Liabilities (Sum of Lines 24 and 25)	(35)	$ 1,297,292
27	Total Net Worth (or Owner's Equity) (FIFO)**	(36)	$ 1,072,599
28	Total Liabilities & Net Worth (Sum of Lines 26 and 27) (Equal to Line 23)	(37)	$ 2,369,891

* If on LIFO, subtract your "Annual Additions to your LIFO reserves" from your cost of goods sold to obtain FIFO cost of goods sold.

** If on LIFO, add your total LIFO reserve to your book net worth to get your FIFO net worth.

*** If your are a Subchapter S Corporation or a partnership, allocate an appropriate management salary for Owner-Managers to the applicable operating expense category(s) and to total operating expense. This would be an amount similar to what would have to be paid to a non-equity owning manager or managers. Doing this will assure that your numbers will be comparable to corporations paying separate management salaries

(OPTIONAL INFORMATION PAGE)

COMPENSATION DATA

LINE #		CODE #	AMOUNT IN DOLLARS (omit cents)
29	Total Payroll Expenses (Include salaries, bonuses and commissions paid to all employees, including owners; exclude fringe benefits and payroll taxes)	(38)	$ 604,313
30	Total of Fringe Benefit Payments and Payroll Taxes (Include Company pension and profit sharing payments plus FICA, Workman's Compensation, Unemployment, Group Insurance, etc., for all employees, including owners)	(39)	$ 234,303
31	Gross Income of the Highest Paid Employee, Including Owners (refer to the person's W-2 statement gross income - as from salaries, commissions and bonuses, but excluding fringe benefits and payroll taxes.)	(40)	$ 50,000
32	Gross Income (as above) of the Second Highest Paid Employee (Including Owners)	(41)	$ 45,000

WAREHOUSE AND DIRECT SALES DATA

33	Dollar Amount of Direct (Drop) Shipment Sales	(42)	$ 644,644
34	Dollar Amount of Warehouse Sales (Counter & Delivery)	(45)	$ 5,240,136
35	Total Sales (Sum of Lines 33 and 34) (Equal to Line 1)	(46)	$ 5,844,780
36	Dollar Amount of Gross Profit on Direct (Drop) Shipments	(47)	$ 96,264
37	Dollar Amount of Gross Profit on Warehouse Sales (Report on FIFO Basis)	(48)	$ 1,396,217
38	Total FIFO Gross Profit (Sum of Lines 36 and 37) (Equal to Line 3)	(49)	$ 1,492,481

ADDITIONAL DATA (VERY IMPORTANT)

39	Previous Year's Net Sales	(50)	$ 6,002,478
40	Previous Year's Ending Inventory (FIFO Basis)	(51)	$ 992,313
41	Average Number of Employees During 1987 (Include all management personnel and all other employees. Convert part-time employees into full-time equivalents depending upon how much they worked relative to full-time employees. For example, two half-time employees each working twelve months would be counted as one employee)	(52)	# 21
42	Percent of Total 1987 Sales that were made for Cash (estimate if necessary)	(53)	17 %
43	Were you on a LIFO Inventory valuation system during 1987?	(54)	Yes ☐ No ☒
44	Total Number of Customer Invoices During the Year	(55)	# 21,484
45	Annual # of Billing Lines on Customer Invoices (estimate if necessary)	(56)	# 171,872
46	Interest Paid in 1987 (also include this amount on Line 13)	(57)	$ 13,092
47	Percent of Warehouse Sales coming from Non-Stock Items (estimate if necessary)	(87)	8 %

DETAIL OF ACCOUNTS RECEIVABLE (YEAR END)

LINE #		CODE #	NUMBER OF ACCOUNTS	CODE #	AMOUNT IN DOLLARS (omit cents)
48	Current (0 - 30 Days Outstanding)	(58)	# 257	(64)	$ 571,339
49	31 - 60 Days Outstanding	(59)	# 47	(65)	$ 154,748
50	61 - 90 Days Outstanding	(60)	# 17	(66)	$ 189,310
51	Over 90 Days Outstanding	(61)	# 28	(67)	$ 181,337
52	Total Accounts Receivable (Sum of Lines 48 thru 51) (Equal to Line 18)	(63)	# 349	(69)	$ 1,096,734

AMERICAN SUPPLY ASSOCIATION

DESCRIPTION OF OPERATING EXPENSE CATEGORIES

Selling Expenses

Selling executive salaries, commissions and bonuses; outside and inside salespeople salaries, commissions and bonuses; other selling personnel (clerical, secretarial and order takers) salaries, bonuses and wages; selling personnel fringe benefits (life insurance; hospitalization; other employee insurance; social security taxes; unemployment taxes; pension trust contributions; profit-sharing trust contributions; other employee welfare; officer's life insurance).

Selling related: supplies; stationery; printing; automobile expense; travel and entertainment; dues and membership; conventions and meetings; education and training; advertising; promotions; brochures; showrooms; merchandise shows; miscellaneous.

Delivery Expenses

Delivery supervisor(s) salaries and bonuses; other delivery personnel (clerical, secretarial, drivers) salaries, bonuses and wages; delivery personnel fringe benefits (life insurance; hospitalization; other employee insurance; social security taxes; unemployment taxes; pension trust contributions; profit-sharing trust contributions; other employee welfare).

Delivery related: supplies; gas and oil; tires; other automotive supplies; towel and uniform services; trucks, automobiles and other equipment repairs and maintenance; insurance (automobiles and trucks); licenses; equipment rental; trucks, automobiles and other equipment depreciation; dues and memberships; education and training; travel and entertainment; delivery services (cartage, freight, express); miscellaneous.

Warehouse Expenses

Warehouse supervisor salaries and bonuses; other warehouse personnel (clerical, secretarial, laborers, and other) salaries, bonuses and wages; warehouse personnel fringe benefits (life insurance; hospitalization; other employee insurance; social security taxes; unemployment taxes; pension trust contributions; profit-sharing trust contributions; other employee welfare).

Warehouse related: supplies; travel and uniform services; equipment repairs and maintenance; insurance (inventory); equipment rental and depreciation; education and training; travel and entertainment; miscellaneous.

General Administrative Expenses

Executive salaries and bonuses; supervisor salaries and bonuses; other salaries and bonuses (including buyers); general and administrative personnel fringe benefits (life insurance; hospitalization; other employee insurance; social security taxes; unemployment taxes; pension trust contributions; profit-sharing trust contributions; other employee welfare; officer's life insurance).

General and administrative related expenses (including purchasing expenses); supplies; stationery and printing; travel and uniform services; telephone and telegraph; postage; automobiles and other equipment repairs, maintenance, and depreciation; insurance (property, automotive, etc.); license, equipment and automobile rental; furniture and fixtures depreciation; automobile expense; travel and entertainment; dues and memberships; conventions and meetings; education and training; employment advertising; collection expense; cash over or short; donations; accounting services; legal services; other services; directors fees; miscellaneous. Also include bad debts written off.

Occupancy Expenses

Facilities management supervisor salaries and bonuses; janitor and maintenance personnel wages; occupancy personnel fringe benefits (life insurance; hospitalization; other employee insurance; social security taxes; unemployment taxes; pension trust contributions, profit-sharing trust contributions; other employee welfare).

Janitor and maintenance supplies; building and building equipment repairs and maintenance; janitor services; building and building equipment insurance; real estate taxes; rent (if applicable); building equipment rental; utilities (power, light, water, heat); building and building equipment depreciations (if applicable); miscellaneous.

Other Operating Expenses

All operating expenses not specified above.

Training
Scholarship
Development

EDUCATION FOUNDATION

ASA Education Foundation, Inc.
20 North Wacker Drive, Suite #2260
Chicago, Illinois 60606
312/236-4082

1989 OPERATING PERFORMANCE REPORT

for the

PHCP Wholesale/Distribution Industry
PVF Distributing Industry

(Based on 1988 Financial Data)

AMERICAN SUPPLY ASSOCIATION

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by

THE AMERICAN SUPPLY ASSOCIATION

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Peter W. Schwartz, Executive Vice President

Professionally prepared by: **Industry Insights, Inc.**
1585 Bethel Road
Columbus, OH 43220
(614) 442-6626

For the seventh consecutive year, the ASA **Annual Operating Performance Report** was compiled, tabulated and analyzed by Industry Insights, Inc. in cooperation with the American Supply Association and key industry members.

Industry Insights, headquartered in Columbus, Ohio, is a professional research and consulting firm providing management and marketing services to trade and professional associations and their members. The company specializes in industry operating surveys, compensation studies, educational programs and customized research services.

(Additional copies of the report are available from the ASA office)
Just call (312) 236-4082

About This Report

This 1989 American Supply Association **Operating Performance Report of the P-H-C-P Wholesale/Distribution and P-V-F Distributing Industries** (based on 1988 financial data) represents the most complete, accurate and up-to-date data base of full-service plumbing, heating, cooling and piping (P-H-C-P) products wholesaler financial and operating results published anywhere. The information contained in this report is designed to provide easy-to-understand guidelines for identifying business performance improvement opportunities.

For the seventh consecutive year, the **Operating Performance Report** (OPR) was prepared by Industry Insights, Inc. of Columbus, Ohio, working closely with the American Supply Association staff. Confidential survey forms (refer to the Appendix for a sample) were sent to ASA members in late February and 300 completed and usable responses were received, representing one of the largest data bases of respondents among any wholesale/distribution industry.

As in the past, this year's report includes comparative financial ratios and statistics by type of firm, sales volume size, high profit firms and geographic region. In addition, building upon the excellent historical information that has resulted from past ASA operating performance surveys, this year's study contains various eight year industry trend data, along with appropriate analysis. Such information is important for identifying shifts occurring within the industry which may be representative of future conditions.

Also featured in this year's report is an overall analysis of industry performance relative to U.S. economic conditions, including both sales and profitability results. In addition, as in the past, a listing of fiscal year-ends is included.

Perhaps the most valuable feature of the ASA **Operating Performance Report** is that all firms participating in the survey have the opportunity to receive a confidential Company Performance Report. This report presents a company's own ratios and data computed in a manner consistent with those appearing in the industry report, and displayed alongside the appropriate industry comparatives. (A few representative pages from a sample Company Performance Report are illustrated on the following page.)

As shown on any given line of the Company Performance Report a firm's own data is included along with industry averages for firms of a comparative sales volume, type of business, geographic region, etc. Thus, the individual owner/manager is provided invaluable information without having to spend time and effort making the calculations manually. In addition, for any firm which participated in more than one consecutive ASA OPR study in recent years, the Company Performance Report includes multiple year **trend data** in graphical form. Also, once again, these highly confidential reports contain a computer-generated qualitative assessment of a company's situation, including some possible alternative courses of action.

SAMPLE

COMPANY PERFORMANCE REPORT

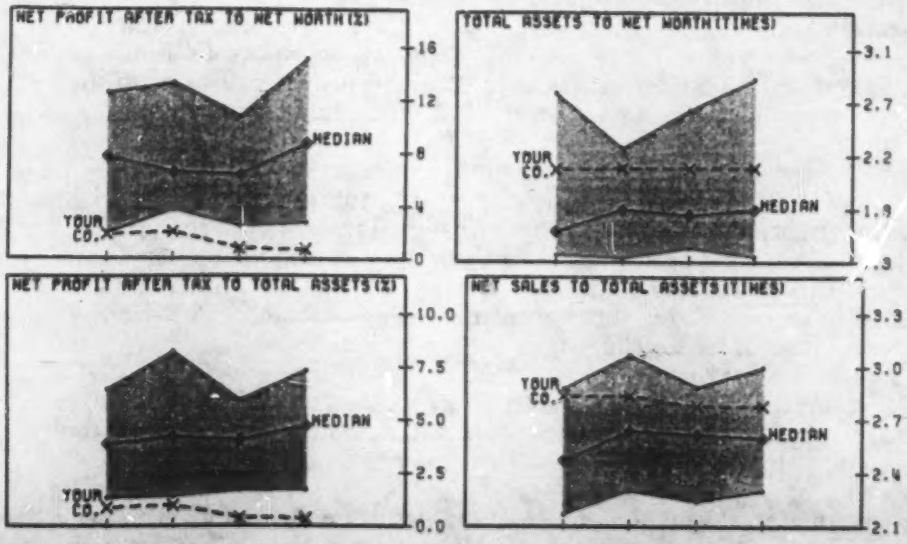
SUMMARY PERFORMANCE EVALUATION

Your Firm's Performance Compared to "All Similar Firms"

NET PROFIT AFTER TAX TO NET WORTH.....(WEAK)

Return on Net Worth (RONW) is one overall measure of company profitability, expressing the percentage return earned on the owner's investment in the business.

Your firm's RONW was below the lower quartile performance level, suggesting that further investigation is warranted to determine where profit leaks are occurring. While you may conclude that no significant problems exist, suggested areas of review are asset turnover, profit margin, and financial leverage (the three basic components of RONW).



AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY — Page 2

COMPANY NO. 500

COMPANY PERFORMANCE REPORT OF 1988 FISCAL YEAR
* * * * CONFIDENTIAL * * * *

NET SALES: $5,884,780

	YOUR FIRM	YOUR REGION TYPICAL	YOUR REGION MIDDLE RANGE	HIGH PROFIT PLUMBING & INDUSTRIAL FIRMS TYPICAL	HIGH PROFIT PLUMBING & INDUSTRIAL FIRMS MIDDLE RANGE
OVERALL PERFORMANCE MEASURES					
Net Profit After Tax to Net Worth	6.5 %	12.4	6.2 - 17.9	14.6	9.0 - 21.6
Total Assets to Net Worth	2.2 TIMES	2.2	1.5 - 3.1	1.7	1.3 - 2.6
Net Profit After Tax to Total Assets	2.9 %	5.4	2.0 - 8.5	8.6	5.2 - 11.5
Net Sales to Total Assets	2.5 TIMES	2.7	2.4 - 3.3	2.7	2.3 - 3.2
Net Profit After Tax to Net Sales	1.2 %	1.8	1.2 - 3.1	2.8	1.9 - 4.5
Net Profit Before Tax to Net Worth	10.6 %	18.0	6.9 - 28.2	24.8	13.5 - 27.4
Net Profit Before Tax to Total Assets	4.8 %	6.4	4.2 - 10.9	9.5	8.2 - 15.8
EBIT to Total Assets	5.4 %	10.1	6.3 - 12.7	12.5	10.7 - 18.9
SALES ANALYSIS					
Net Sales($000)	$5,885	5,874	3,381 - 9,277	7,309	4,954 - 16,814
Percent Sales Change from Prior Year	-2.0 %	10.8	6.9 - 18.0	12.1	6.2 - 18.2
Sales Mix:					
Direct Sales	11.0 %	10.6	3.0 - 15.0	6.8	0.2 - 13.7
Warehouse Sales - Counter and Delivery	89.7 %	89.4	84.1 - 96.9	93.2	86.3 - 99.8
TOTAL SALES	100.0 %	100.0	100.0 - 100.0	100.0	100.0 - 100.0
PRODUCT SALES MIX					
Plumbing Supplies & Equipment	30.0 %	43.3	28.0 - 61.8	39.9	35.0 - 50.0
Heating & Cooling Supplies & Equipment	0.0 %	13.5	0.0 - 22.0	23.3	20.0 - 28.0
Industrial P-V-F (Pipes-Valves-Fittings)	30.0 %	19.2	0.0 - 30.0	23.8	12.0 - 35.0
Other Industrial Supplies & Equipment	30.0 %	7.7	0.0 - 5.4	5.7	0.0 - 8.0
Other Products	10.0 %	16.2	0.0 - 30.0	7.3	0.0 - 18.0
TOTAL SALES	100.0 %	100.0	100.0 - 100.0	100.0	100.0 - 100.0

Wouldn't it be great to track your firm's performance month-to-month and compare your results to industry averages?

... Now you can with ProfiTrak®

Your Desktop Financial Partner

ProfiTrak, an easy-to-use software program, makes it possible for you to monitor your company's progress on a timely basis. Designed for IBM® PC/XT/AT or compatible computers, **ProfiTrak** will help you determine:

- Where your firm is wasting money.
- If you are as profitable as you should and can be.
- If your employees are productive.
- If your firm is financially strong.
- If your receivables are well-managed.

ProfiTrak is Unique . . .

ProfiTrak is specifically designed for your firm and your industry. Based on your participation in the association's recent financial operating performance survey, your confidential **ProfiTrak** diskette will be sent to you already containing your firm's results and appropriate industry comparatives. Even if you did not participate in the association survey, you can easily enter your numbers into **ProfiTrak** and the program will calculate your ratios and make comparisons to industry norms. Now you won't be wasting valuable time trying to customize the software to your industry. Also, since your **ProfiTrak** diskette is self-contained, there is no need to adapt to a complicated spread-sheet program.

Heard reports of other software that have fallen short? . . .

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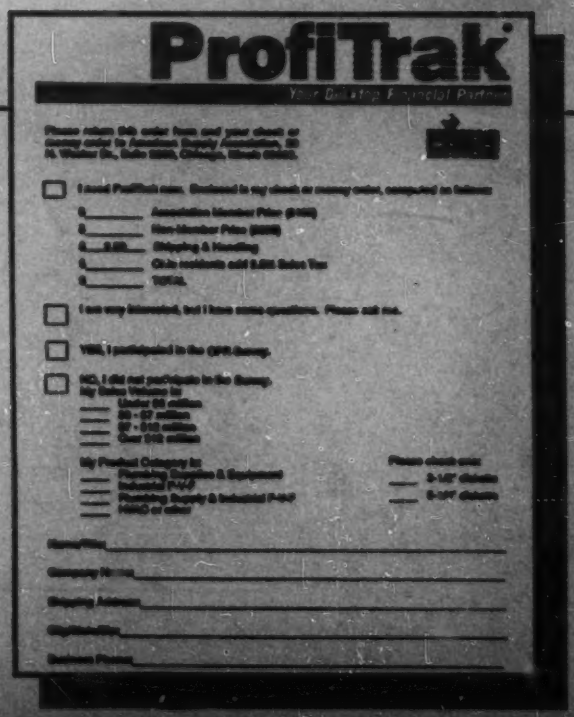

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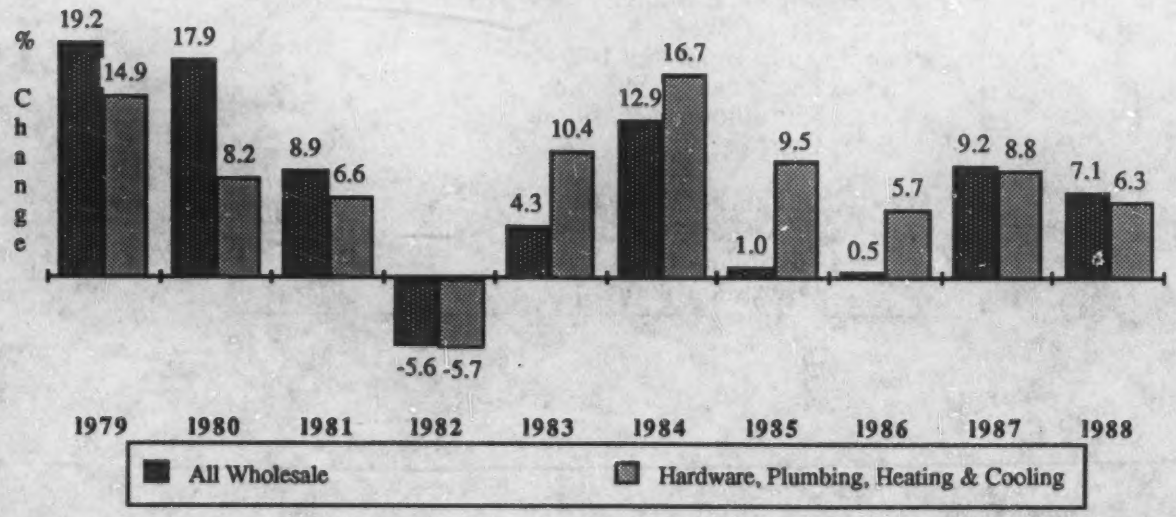
P-H-C-P Wholesaling--Overview of 1988 Industry Performance

Despite a rather slow fourth quarter finish, the overall economy (as measured by the U.S. Gross National Product) grew at a "real" (inflation adjusted) rate of 3.8% in 1988, a slight increase from 1987. Due to a myriad of economic concerns including higher interest rates, slower consumer spending, hesitant business investment activity, and trade deficit troubles, economists are projecting slower GNP growth in upcoming years.

1988 P-H-C-P WHOLESALING SALES PERFORMANCE

As the chart below indicates, based on U.S. Census Bureau figures, wholesalers in general outpaced the overall growth of the economy, posting a 7.1% increase in sales. Although outperforming other sectors of the economy, wholesalers did experience a slowing of sales growth compared with the 9.2% experienced in 1987. Wholesalers of hardware, plumbing, heating, air conditioning and refrigeration equipment experienced similar results (6.3% growth), surpassing the growth of the overall economy, but experiencing slower growth than the previous year.

GROWTH OF HARDWARE, PLUMBING, HEATING & COOLING VS. ALL WHOLESALE SALES
Annual Growth Percent



In contrast to census data, ASA members responding to this year's survey reported a typical sales increase of 11.3%. This is the second consecutive year of double-digit sales increases posted by participating firms.

As the following table displays, "Industrial P-V-F Firms" led the way with a typical sales increase of 18.8%, while "HVAC and Other Emphasis Firms" posted an above average increase as well (13.0%). Although results varied by product emphasis and sales volume size, overall, larger volume firms tended to experience larger percent increases in 1988.

1988 Median Sales Growth	
ALL P-H-C-P WHOLESALERS	11.3%
BY PRODUCT EMPHASIS	
Plumbing Equipment and Supplies	8.5%
Industrial Pipes-Valves-Fittings (P-V-F)	18.8
Plumbing and Industrial P-V-F	10.2
HVAC and Other Emphasis	13.0
BY SALES VOLUME	
Plumbing Equipment & Supplies:	
Sales Less Than $4 Million	7.7%
Sales $4 Million to $7 Million	10.4
Sales $7 Million to $12 Million	8.2
Sales Over $12 Million	10.1
Industrial P-V-F:	
Sales Less Than $5 Million	10.8%
Sales $5 Million to $12 Million	17.1
Sales Over $12 Million	23.8
Plumbing and Industrial P-V-F:	
Sales Less Than $5 Million	14.1%
Sales $5 Million to $9 Million	8.9
Sales Over $9 Million	10.2
HVAC and Other Emphasis:	
Sales Less Than $6 Million	10.2%
Sales $6 Million to $12 Million	13.0
Sales Over $12 Million	16.6

1988 PROFITABILITY PERFORMANCE

Along with a strong growth in sales in 1988, the overall profitability of P-H-C-P wholesalers increased nearly across the board. Return on net worth (after tax) for the typical firm was 12.5%, a healthy increase from the 9.8% experienced in 1987. "Industrial P-V-F Firms" boosted their return on net worth over 50% from the previous year, achieving a superior 15.4% return in 1988. "Plumbing Supplies and Industrial P-V-F Firms" were the least profitable group, experiencing an 8.1% return on net worth, down from the 8.9% experienced the previous year.

1988 Median Return on Net Worth	
ALL P-H-C-P WHOLESALERS	12.5%
BY PRODUCT EMPHASIS	
Plumbing Equipment and Supplies	12.4%
Industrial Pipes-Valves-Fittings (P-V-F)	15.4
Plumbing and Industrial P-V-F	8.1
HVAC and Other Emphasis	11.3
BY SALES VOLUME	
Plumbing Equipment & Supplies:	
Sales Less Than $4 Million	8.6%
Sales $4 Million to $7 Million	11.2
Sales $7 Million to $12 Million	12.9
Sales Over $12 Million	13.7
Industrial P-V-F:	
Sales Less Than $5 Million	12.6%
Sales $5 Million to $12 Million	19.9
Sales Over $12 Million	16.8
Plumbing and Industrial P-V-F:	
Sales Less Than $5 Million	13.4%
Sales $5 Million to $9 Million	7.0
Sales Over $9 Million	9.0
HVAC and Other Emphasis:	
Sales Less Than $6 Million	11.3%
Sales $6 Million to $12 Million	14.2
Sales Over $12 Million	10.9

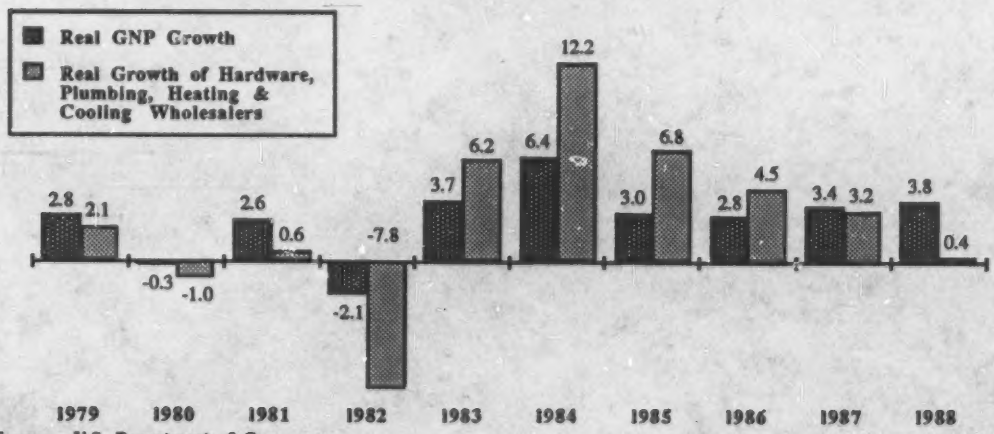
P-H-C-P Wholesaling (1979-1988)

Based on information provided by the U.S. Bureau of the Census, the compound annual sales growth of hardware, plumbing, heating and cooling wholesalers over the past ten years has been 6.4%. This growth exceeds that experienced by the wholesale trade in general, but falls slightly below that of all durable goods wholesaler growth.

Annual Wholesale Sales Growth (%) 1979-1988	
All Wholesale Trade	5.8%
All Durable Goods Wholesalers	6.8
Electrical Goods	10.4
Motor Vehicles & Automotive Equipment	8.9
Furniture & Home Furnishings	7.6
Machinery, Equipment & Supplies	6.0
Hardware, Plumbing & Heating Equipment	6.4
Source: U.S. Bureau of the Census	

The following exhibit graphs the growth of hardware, plumbing and heating wholesalers over the past ten years compared with that of the economy in general. As the chart indicates, a close similarity exists between the two, indicating how closely this industry is aligned to the overall economy. During the recession years of 1980-1982, the overall U.S. economy was in a recession, and our industry likewise experienced negative growth rates. As the overall economy rebounded in 1983-84, so did hardware, plumbing and heating wholesalers. Since that time, both the overall economy and this industry have experienced slow but steady growth. After adjusting for inflation in 1988, the industry experienced nearly constant sales.

REAL GROWTH OF HARDWARE, PLUMBING, HEATING & COOLING WHOLESALE SALES VS. REAL GNP GROWTH (Inflation Adjusted)



Source: U.S. Department of Commerce Bureau of the Census

How To Use This Report

The 1989 ASA **Operating Performance Report of the P-H-C-P Wholesaler/Distribution and P-V-F Distributing Industries** has been designed to help wholesalers evaluate their own performance relative to that of similar companies in order to identify improvement opportunities. The statistics in this report represent broad performance *"yardsticks"* against which a company's performance can be measured.

Using this information P-H-C-P and P-V-F wholesalers can compare their own firm's financial and operating performance with: the industry as a whole; with firms having the same general product emphasis; with firms of a comparable sales volume and/or geographic region; and with the highest profit firms. Spotting significant differences between your own firm's performance and the industry composites can be the first step toward improving performance. Keep in mind. however, that deviations from industry norms do not automatically call for some action on your part. The most important thing to do is to be able to explain why your firm experienced significant deviations from the *"typical"* wholesaler in the industry.

In order to obtain maximum advantage from the information contained in this report while at the same time minimizing your analysis time and effort, we recommend you follow the step-by-step approach outlined below.

Step 1: Collect the Necessary Company Data

The first step in using this report is to gather all your financial and operating results for your 1988 fiscal year. Most of the needed data can be obtained from your company accounting records, but a small amount will have to be extracted from other sources, such as personnel files, advertising records and the like. If you participated in the 1989 ASA **Operating Performance Survey**, this step has probably already been done.

Step 2: Calculate the Ratios

The second step is to compute all of the various performance measures for your firm that are included in this report using the data gathered in Step 1. **It is extremely important to calculate these ratios using the same formulas which were used to produce the ratios in this report.** These formulas, along with sample calculations of each measure, appear in the section of this report entitled, "Ratio Definitions and Sample Calculations," located in the Appendix.

Companies which participated in the survey and filled the survey form out completely received, **absolutely free**, a confidential Company Performance Report of their own firm's financial ratios calculated and formatted in a manner that is consistent with the information in this report. Thus, for those firms, Step 2 has already been completed for them in an accurate, time saving manner. P-H-C-P wholesalers that did not participate in the 1989 survey should strongly consider doing so in the future.

Step 3: Compare the Results

Next, compare your company's performance with the survey results of other firms in the industry. As you do so, several points should be recognized:

1. *A deviation between your firm's figures (for any performance measure) and numbers in the report is not necessarily good or bad. It merely indicates that additional analysis may be required.* As a rule, the larger the difference, the greater the need for further investigation.

2. In situations where large deviations do exist, it may be helpful to go back and calculate the same performance measure over the past several years to identify any trends that may exist.

3. The information in this report should be used as tools for informed decision making rather than absolute standards. Since firms differ as to their product emphasis strategy, location, size, and other factors, any two firms can be successful, yet have very different experiences with regard to certain performance measures.

UNDERSTANDING THE DATA

In order to use the information in this report to maximum advantage, it is important to understand *what the numbers mean* and *how to interpret them.*

How the Tables are Organized

The tables in this report are organized to include a number of important financial ratios for each relevant "grouping" of similar firms. In particular, the major "groupings" used include:

- All Reporting Firms--refers to the results of all firms responding to the survey.
- Product Emphasis Group:
  - Plumbing Supplies & Equipment Firms--those firms that derive over 50% of sales from plumbing products.
  - Industrial P-V-F Firms--those firms that derive over 50% of sales from Industrial P-V-F products.
  - Plumbing Supplies & Equipment and Industrial P-V-F Firms--those firms that derive more than 50% of sales from plumbing and industrial P-V-F products combined but less than 50% from either category alone.
  - HVAC & Other Emphasis Firms--those firms that cannot be classified in any of the above three groups; or those companies which derive less than 50% of sales from combined plumbing supplies and equipment, and industrial P-V-F.
- Product Emphasis Group by Sales Volume Size:
  - Plumbing Supplies & Equipment Firms--All Reporting Firms
  - Plumbing Supplies & Equipment Firms--Sales Under $4 Million

- Plumbing Supplies & Equipment Firms--Sales $4-$7 Million
- Plumbing Supplies & Equipment Firms--Sales $7-$12 Million
- Plumbing Supplies & Equipment Firms--Sales Over $12 Million

- Industrial P-V-F Firms--All Reporting Firms
- Industrial P-V-F Firms--Sales Under $5 Million
- Industrial P-V-F Firms--Sales $5-$12 Million
- Industrial P-V-F Firms--Sales Over $12 Million

- Plumbing Supplies & Industrial P-V-F Firms--All Reporting Firms
- Plumbing Supplies & Industrial P-V-F Firms--Sales Under $5 Million
- Plumbing Supplies & Industrial P-V-F Firms--Sales $5-$9 Million
- Plumbing Supplies & Industrial P-V-F Firms--Sales Over $9 Million

- HVAC & Other Firms--All Reporting Firms
- HVAC & Other Firms--Sales Under $6 Million
- HVAC & Other Firms--Sales $6-$12 Million
- HVAC & Other Firms--Sales Over $12 Million

- By Regional Association Affiliation:

  - NEWA (CT, ME, MA, NH, RI, VT)
  - NYSPHW (NY, Excluding New York City)
  - MAWA (DE, E. PA, MD, NJ, DC)
  - CWA (IN, OH, W. PA, WV)
  - SWA (AL, FL, GA, KY, MS, NC, SC, TN, VA)
  - MAD (MI, excluding Upper MI)
  - Metro Chicago, Northern IL
  - MASA (IA, KS, MN, MO, NE, ND, SD, Upper MI, WI, Southern IL)
  - WDA (LA, TX, NM, OK, AR, CO)
  - WSA (ID, MT, WY, AK, OR, WA, HI, Northern CA, Northern NV)
  - PSDA (AZ, Southern CA, Southern NV, UT)

- By Product Emphasis Group by High Profit Firms (refers to the upper quartile performers based on Before Tax Return on Assets):

  - High Profit Plumbing Supplies & Equipment Firms
  - High Profit Industrial P-V-F Firms
  - High Profit Plumbing Supplies & Equipment and Industrial P-V-F Firms
  - High Profit HVAC & Other Emphasis Firms

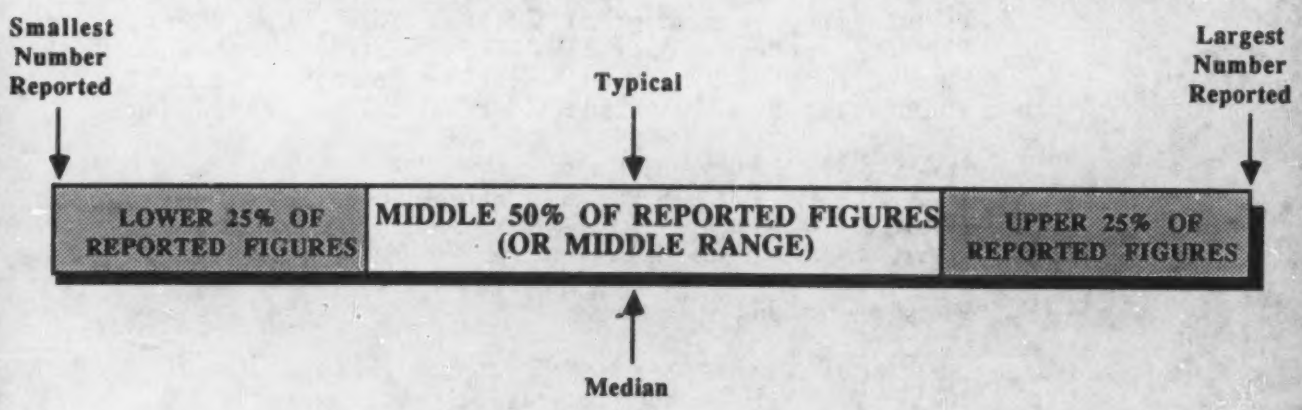
- Large Volume Firms (those with sales volume of $50 million & over)

INTERPRETING THE NUMBERS

Most of the performance indicators included in this study are reported on the basis of medians rather than arithmetical averages or means. Unlike the mean, the median is not distorted by a few unusually high or low values that may exist in the sample due to special circumstances. The "median" figure represents the mid-point of the figures for a particular measure, with one-half of the firms reporting figures above it and one-half below. Each median was computed independently based on the companies which reported for that item. As a result, **relationships do not always exist** when different ratios are used together in the calculation. For example,

the median net sales minus the median cost of goods sold may not necessarily equal the median gross margin percent.

Also included for most of the performance indicators is the "Middle Range." This represents the experience of the middle 50 percent of all firms in the data grouping when items are arranged numerically from lowest to highest. In other words, the upper and lower limits on the "Middle Range" are simply the upper and lower quartiles respectively for that ratio.



Figures reported by responding members were not used unless they were in accordance with the survey instructions and definitions. In cases where the number of companies reporting was considered inadequate for the computation of a meaningful figure, blank spaces appear in the tables, or an "insufficient data" notation is included.

Further insights into how to use this report are included in the Appendix in the section entitled: "Ratio Definitions and Sample Calculations." An important point to keep in mind when using this report is that *even relatively simple analysis of your company's own financials using the industry data for comparison can yield important insights into your business. You do not have to be a financial expert to benefit from this information.*

1989 ASA OPERATING PERFORMANCE SURVEY

DETAILED RESULTS

Executive Summary of Survey Results

As in past years, the *1989 ASA Operating Performance Report* (for the P-H-C-P Wholesale/Distribution and P-V-F Distributing Industries) is organized as a detailed set of easily referenced industry performance tables (provided on pages 41 through 159 of this report). These are divided into four primary sections corresponding to the major product emphasis groups in the industry, including:

- Plumbing Supplies and Equipment Firms
- Industrial P-V-F Firms
- Plumbing Supplies and Industrial P-V-F Firms
- HVAC and Other Emphasis Firms

In using this study to evaluate your own company's performance, you should refer to the section which most closely corresponds to your firm's operation. This detailed information should be kept handy and referenced from time-to-time as a tool for better controlling your business.

While the comprehensive tables included in this report are designed to serve as an ongoing reference tool, important insights can be learned about the overall industry operating performance experienced during 1988. Even more importantly, the industry performance results for 1988 can be compared to that which was achieved in prior years in order to identify any trends that may have occurred. This is useful for understanding not only where the industry has been, but also for anticipating the future direction of the P-H-C-P wholesale/distribution business.

Some highlights of this year's survey results are provided below, as well as insights regarding key patterns of change during the 1981-88 period.

EIGHT-YEAR TREND PERFORMANCE COMPARISON, 1981-1988

The series of summary tables shown on the next several pages have been abstracted from the comprehensive set of complete statistics. These data represent good overall gauges of P-H-C-P wholesaler performance in the key areas of productivity, financial management, control of accounts receivable, expense and profit trends, and sales performance.

PRODUCTIVITY MANAGEMENT

Each year's *Operating Performance Report* confirms that a key determinant of profitability among industry firms is the effectiveness and efficiency with which the company operates. Invariably, companies that are the most **productive** are also the most **profitable**, regardless of company size, type of product emphasis, geographic area, economic climate, and/or most other factors.

Through the last eight years, the particular areas of productivity management that tend to be most critical for company success are inventory and personnel. Payroll costs alone represent over half of total operating expenses for the typical industry

firm, while inventory investment is, by far, the largest asset investment item (representing nearly 50% of total assets).

Based on the eight-year, industry-wide ASA survey results shown on the following tables, the most noteworthy observations are as follows:

- Typical gross margin levels among all survey participants have remained fairly steady over the 1981-1988 period, averaging around 25%. However, within each of the four product emphasis groups, varying gross margin patterns have existed:

  - Firms categorized as "Plumbing Supplies and Equipment" experienced the second straight year of gross margins of 24.7%. This follows several years of gross margin levels of 24.1% to 24.3%.

  - "Industrial P-V-F Firms" experienced increasing gross margin levels from 1982 through 1986, but suffered a slight decrease to 26.8% in 1987. This year, "Industrial P-V-F Firms" saw a strong rebound in gross margins, posting a level of 28.1%.

  - "Plumbing Supplies and Industrial P-V-F Firms" have experienced a somewhat volatile gross margin performance over the years, with 1988 bringing a slight increase.

  - "HVAC and Other Emphasis Firms" experienced a slight decrease in gross margins this year, after an increase in 1987.

- Personnel productivity (as measured by payroll and fringe benefits as a percentage of net sales) has, through the years 1981-1987, gradually improved for P-H-C-P wholesalers in the aggregate. This trend took a somewhat adverse turn in 1988 though, increasing to 13.9% of net sales. This same basic pattern was true for each of the various product emphasis groups, but in no case were payroll costs relative to sales as high as the levels reached earlier in the 1980's.

- Inventory turnover (i.e., cost of warehouse goods sold to average inventory), has fluctuated little over the past several years for all P-H-C-P wholesalers in the aggregate. This year saw a slight increase to 3.7x (compared with 3.6x in 1987). Results varied according to product emphasis though, with "Industrial P-V-F Firms" achieving a significant increase, from 3.5x in 1987, to 4.2x in 1988. Other product emphasis groups experienced faster inventory turnover also, although their 1988 increases were less pronounced.

ALL REPORTING P-H-C-P AND P-V-F WHOLESALER/DISTRIBUTORS

EIGHT-YEAR SUMMARY PERFORMANCE COMPARISON 1981-1988

	1988	1987	1986	1985	1984	1983	1982	1981
Financial Management								
Total Debt to Net Worth	110.6%	104.6%	90.8%	88.0%	82.7%	78.4%	68.3%	74.1%
Current Assets minus Inventory to Current Debt	1.0x	1.0x	1.0x	1.1x	1.1x	1.1x	1.3x	1.1x
Personnel Productivity								
Net Sales per Employee	$220,921	$200,712	$193,225	$187,024	$186,131	$167,380	$152,258	$162,040
Payroll and Fringe Benefits to Net Sales	13.9%	13.0%	13.3%	13.5%	13.7%	14.1%	14.5%	14.1%
Inventory Management								
Gross Margin on Sales	25.3%	25.1%	24.9%	24.9%	24.5%	24.8%	25.0%	24.7%
Cost of Warehouse Goods Sold to Average Inventory	3.7x	3.6x	3.6x	3.4x	3.6x	3.3x	3.1x	3.4x
Total Cost of Goods Sold to Average Inventory	4.5x	4.2x	4.2x	4.0x	4.1x	3.8x	3.6x	3.8x
Warehouse Gross Margin Return on Inventory	131%	128%	122%	120%	123%	114%	109%	119%
Accounts Receivable								
Average Collection Period (days)	49	48	47	47	48	50	47	44
Expense Management								
Total Operating Expenses as a Percent of Sales	22.3%	22.7%	22.9%	21.9%	21.5%	22.4%	23.2%	21.7%
Sales Performance								
Percent Sales Change from Prior Year	11.3%	11.0%	8.2%	8.3%	15.2%	10.5%	-4.3%	0.9%

PLUMBING SUPPLIES & EQUIPMENT FIRMS

EIGHT-YEAR SUMMARY PERFORMANCE COMPARISON
1981-1988

	1988	1987	1986	1985	1984	1983	1982	1981
Financial Management								
Total Debt to Net Worth	136.1%	109.8%	106.9%	92.8%	90.7%	85.8%	68.9%	78.1%
Current Assets minus Inventory to Current Debt	0.94x	1.0x	1.1x	1.0x	1.0x	1.0x	1.3x	1.1x
Personnel Productivity								
Net Sales per Employee	$222,209	$203,256	$196,208	$195,342	$189,182	$171,166	$158,548	$162,470
Payroll and Fringe Benefits to Net Sales	13.7%	12.6%	13.1%	13.2%	13.5%	13.7%	14.1%	13.8%
Inventory Management								
Gross Margin on Sales	24.7%	24.7%	24.1%	24.3%	24.3%	24.3%	25.0%	24.4%
Cost of Warehouse Goods Sold to Average Inventory	3.7x	3.6x	3.9x	3.7x	3.8x	3.7x	3.3x	3.5x
Total Cost of Goods Sold to Average Inventory	4.4x	4.1x	4.1x	4.0x	4.2x	4.1x	3.7	4.2x
Warehouse Gross Margin Return on Inventory	126%	129%	124%	118%	126%	124%	113%	127%
Accounts Receivable								
Average Collection Period (days)	52	51	48	48	49	50	50	44
Expense Management								
Total Operating Expenses as a Percent of Sales	22.1%	22.6%	22.3%	21.4%	21.3%	21.8%	22.7%	21.6%
Sales Performance								
Percent Sales Change from Prior Year	8.5%	9.3%	9.4%	9.8%	14.7%	18.1%	-3.1%	0.5%

INDUSTRIAL P-V-F FIRMS

EIGHT-YEAR SUMMARY PERFORMANCE COMPARISON
1981-1988

	1988	1987	1986	1985	1984	1983	1982	1981
Financial Management								
Total Debt to Net Worth	110.4%	104.6%	80.7%	84.1%	74.4%	83.9%	83.3%	64.2%
Current Assets minus Inventory to Current Debt	1.0x	1.0x	1.2x	1.0x	1.1x	1.1x	1.2x	1.0x
Personnel Productivity								
Net Sales per Employee	$251,503	$210,031	$205,236	$218,040	$197,975	$196,923	$201,377	$198,150
Payroll and Fringe Benefits to Net Sales	15.1%	14.7%	14.6%	15.9%	14.4%	14.1%	13.9%	12.9%
Inventory Management								
Gross Margin on Sales	28.1%	26.8%	27.4%	27.1%	25.7%	24.4%	23.4%	25.1%
Cost of Warehouse Goods Sold to Average Inventory	4.2x	3.5x	3.3x	3.3x	3.2x	3.1x	2.7x	3.0x
Total Cost of Goods Sold to Average Inventory	4.9x	4.6x	4.2x	4.1x	4.2x	3.6x	3.7x	3.4x
Warehouse Gross Margin Return on Inventory	159%	143%	127%	127%	121%	109%	95%	111%
Accounts Receivable								
Average Collection Period (days)	46	48	43	43	48	51	40	40
Expense Management								
Total Operating Expenses as a Percent of Sales	23.8%	24.6%	25.3%	23.1%	22.2%	23.6%	22.0%	20.6%
Sales Performance								
Percent Sales Change from Prior Year	18.8%	13.5%	0.1%	9.5%	20.1%	-6.8%	-11.7%	3.6%

PLUMBING SUPPLIES & EQUIPMENT & INDUSTRIAL P-V-F FIRMS

EIGHT-YEAR SUMMARY PERFORMANCE COMPARISON
1981-1988

	1988	1987	1986	1985	1984	1983	1982	1981
Financial Management								
Total Debt to Net Worth	81.4%	75.7%	73.4%	79.9%	61.7%	56.7%	42.5%	52.3%
Current Assets minus Inventory to Current Debt	1.0x	1.1x	1.1x	1.2x	1.3x	1.4x	1.5x	1.4x
Personnel Productivity								
Net Sales per Employee	$202,519	$202,179	$189,599	$191,710	$191,422	$167,513	$152,807	$157,900
Payroll and Fringe Benefits to Net Sales	15.2%	14.4%	14.9%	14.2%	13.7%	14.3%	15.3%	14.2%
Inventory Management								
Gross Margin on Sales	25.6%	24.8%	25.9%	24.8%	23.7%	24.1%	25.2%	24.5%
Cost of Warehouse Goods Sold to Average Inventory	4.1x	3.9x	3.7x	3.7x	3.4x	3.4x	2.8x	3.1x
Total Cost of Goods Sold to Average Inventory	4.6x	4.2x	4.4x	4.5x	4.1x	4.0x	3.6x	3.9x
Warehouse Gross Margin Return on Inventory	137%	125%	130%	127%	111%	108%	106%	114%
Accounts Receivable								
Average Collection Period (days)	50	48	54	51	48	49	46	47
Expense Management								
Total Operating Expenses as a Percent of Sales	22.8%	22.3%	23.6%	21.7%	21.3%	22.7%	24.7%	21.2%
Sales Performance								
Percent Sales Change from Prior Year	10.2%	13.8%	8.3%	7.3%	14.2%	12.7%	-3.7%	2.8%

HVAC & OTHER EMPHASIS FIRMS

EIGHT-YEAR SUMMARY PERFORMANCE COMPARISON
1981-1988

	1988	1987	1986	1985	1984	1983	1982	1981
Financial Management								
Total Debt to Net Worth	92.1%	106.5%	92.5%	78.9%	83.8%	87.1%	92.7%	102.1%
Current Assets minus Inventory to Current Debt	0.9x	0.9x	0.9x	1.0x	1.0x	1.0x	1.1x	1.0x
Personnel Productivity								
Net Sales per Employee	$217,748	$184,982	$177,161	$166,551	$164,970	$144,910	$133,715	$133,470
Payroll and Fringe Benefits to Net Sales	13.0%	12.5%	12.6%	12.7%	13.9%	14.3%	15.1%	15.6%
Inventory Management								
Gross Margin on Sales	24.7%	25.1%	24.5%	25.2%	24.9%	26.2%	26.1%	26.1%
Cost of Warehouse Goods Sold to Average Inventory	3.6x	3.4x	3.3x	3.1x	3.3x	2.8x	3.3x	3.1x
Total Cost of Goods Sold to Average Inventory	4.3x	3.8x	3.7x	3.4x	3.9x	3.4x	3.4x	3.5x
Warehouse Gross Margin Return on Inventory	120%	110%	113%	109%	118%	102%	111%	118%
Accounts Receivable								
Average Collection Period (days)	44	45	46	46	46	49	50	43
Expense Management								
Total Operating Expenses as a Percent of Sales	21.5%	22.0%	22.3%	22.9%	22.3%	23.5%	25.1%	23.5%
Sales Performance								
Percent Sales Change from Prior Year	13.0%	11.1%	10.9%	7.9%	14.6%	7.8%	-3.7%	-0.8%

ACCOUNTS RECEIVABLE MANAGEMENT

Another important component of P-H-C-P wholesaler success is the extent to which the company's customers make timely payment on invoices. If invoices are not collected promptly, several unfavorable circumstances typically occur:

- Cash flow becomes tight (due to all the excess dollars tied up in receivables) and paying current bills on time may become difficult.

- Profitability leaks occur since excess receivables have corresponding costs, such as administrative costs, financing costs, and possibly outside agency costs (i.e., lawyers, credit bureaus, collection agencies, etc.). In addition, if receivables problems persist, bad debt expenses may become more and more significant.

- Money tied up in excess receivables can prohibit your firm from taking advantage of growth opportunities and could jeopardize your ability to compete effectively.

The *Operating Performance Report* each year provides several indicators of receivables management that can be used as a gauge for monitoring your own firm's credit and collections situation. One such measure is the ratio called "average collection period" (or "days outstanding in receivables," as it is sometimes called). Based on the accompanying trend information, this measure has shown the following pattern in recent years for the four product emphasis groups:

- "Plumbing Supplies & Equipment Firms" have typically reported an average collection period of around 50 days. This year, results were slightly less favorable than in the recent past, with the average collection period being 52 days.

- "Industrial P-V-F Firms" have experienced an average collection period over the last eight years of just under 45 days. This year the typical firm experienced an average collection period of 46 days.

- Those companies classified as "Plumbing Supplies & Equipment and Industrial P-V-F Firms" have experienced a somewhat erratic "average collection period" through the years, with 1988 bringing an increase to 50 days.

- "HVAC and Other Emphasis Firms" continue to improve their accounts receivable management, achieving a decrease in average collection period to 44 days in 1988, the lowest experienced among the four product emphasis groups.

While no apparent significant adverse trend has occurred among P-H-C-P wholesalers in the collection of customer accounts, receivables management can have a critically important impact on profitability, depending on how much is "tied up" in receivables and for how long. *For example, $100,000 in receivables can cost you $1,000 to $1,200 per month at today's interest rates just in interest alone, depending on your firm's borrowing rate, or depending upon what you could earn on that money if available for alternative uses. Moreover, money invested in receivables can have a significant influence on your firm's cash flow situation, depending upon the pattern for receiving payment on those accounts.*

In addition to the "average collection period" ratio, another tool provided in this *Operating Performance Report* for managing your receivables is through the accounts receivable aging information which is summarized below. These data show the percentage of total receivables that are:

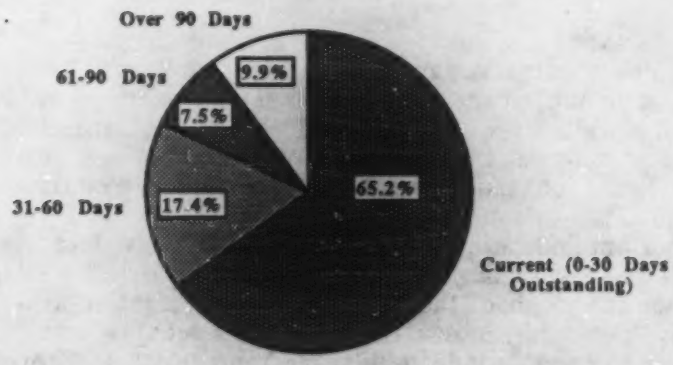
- Current (0-30 days since the original date of invoice)
- 31-60 days since the original date of invoice
- 61-90 days since the original date of invoice
- Over 90 days since the original date of invoice

As shown in the charts provided, at year-end 1988, the typical P-H-C-P wholesaler had 65.2% of receivables that were current (0-30 days since the original invoice date); 17.4% that were 31-60 days since the original invoice date; 7.5% that were 61-90 days since the original invoice date; and 9.9% outstanding over 90 days since being invoiced. This same general pattern was true for each of the four product emphasis groups shown. However, the "Plumbing Supplies & Equipment Firms" responding to the ASA survey continue to have a higher percentage of receivables outstanding over 60 days (20.3%) than any of the other categories.

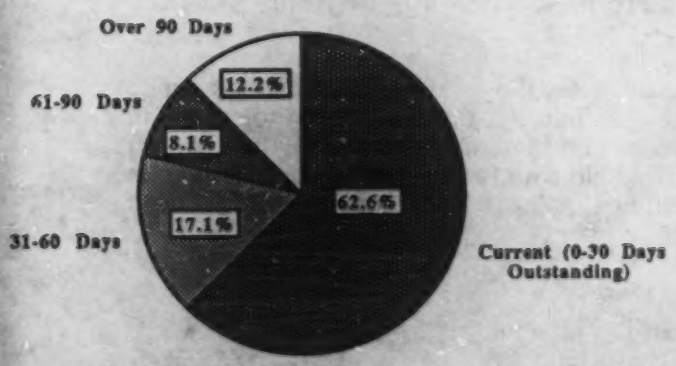
ACCOUNTS RECEIVABLE AGING -- 1988

(Percent of Accounts Receivable Dollars Current & Past Due)

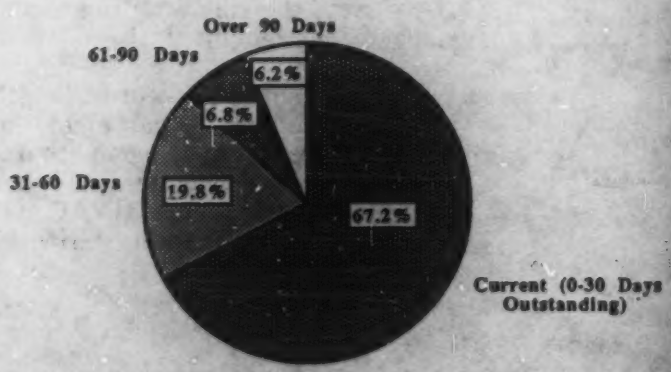
ALL REPORTING FIRMS



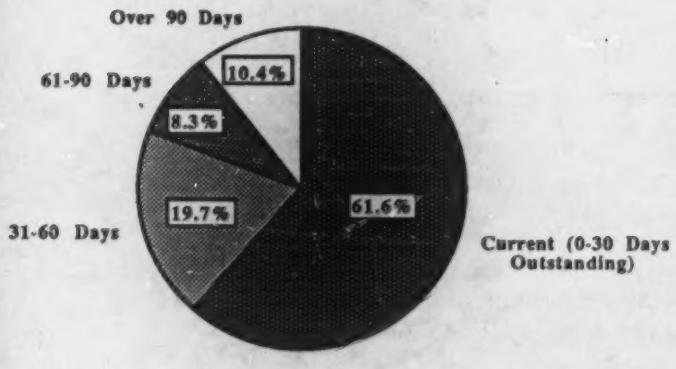
PLUMBING SUPPLIES AND EQUIPMENT FIRMS



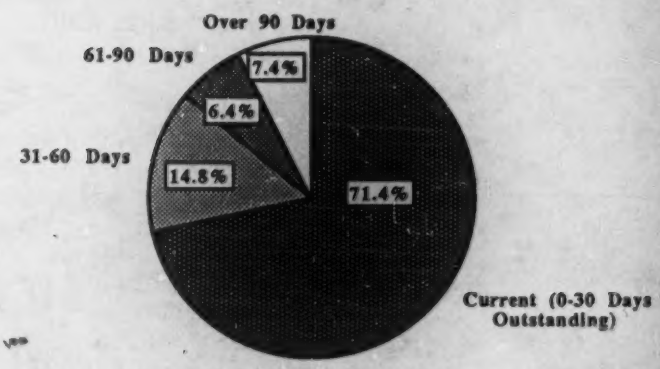
INDUSTRIAL P-V-F FIRMS



PLUMBING SUPLIES & EQUIPMENT
AND INDUSTRIAL P-V-F FIRMS



HVAC & OTHER EMPHASIS FIRMS



FINANCIAL MANAGEMENT

Virtually all P-H-C-P wholesalers at one time or another are faced with the need to finance their business. This may come in the form of a line of credit to support temporary cash flow needs, money to finance receivables, cash for capital expenditures and business expansion, or many other purposes. When this occurs, the more financial strength you can show your lender regarding your business, the greater likelihood you will be able to obtain the financing required and at favorable rates.

As a tool for evaluating and managing your firm's financial strength, a number of financial management measures are provided in each year's *Operating Performance Report*. Given that your banker and/or other lender(s) are probably not extremely familiar with the specifics of the P-H-C-P wholesale/distribution business, the information in this study can be presented along with your figures when applying for loans. This will guide your lender in better understanding your operations.

The most important indicators of financial strength are **leverage** and **liquidity**. Essentially, *leverage* shows the degree to which a firm relies on creditors funds (debt) to finance a portion of the business. *Liquidity* refers to a firm's ability to meet its current debt obligations (that is, pay its bills). In the summary tables provided earlier, leverage is indicated by the ratio "total debt to net worth" while liquidity is measured by "current assets minus inventory to current debt."

Among the four product emphasis groupings of firms participating in this year's ASA survey, the following observations are most noteworthy regarding financial management strength:

- "Total debt to net worth" (which is an indication of "leverage") has gradually increased over the past eight years. This indicates that P-H-C-P wholesalers in the aggregate have tended to rely more and more on debt (rather than equity) financing. This pattern has generally held true for all four product emphasis categories, although "HVAC and Other Emphasis Firms" significantly reduced their leverage situation during 1988.

- "Plumbing Supplies & Equipment Firms" continue to be the most highly leveraged group, and experienced a significant increase in debt-financing this year, soaring from a "total debt to net worth" level of 109.8% in 1987, to 136.1% in 1988. "Plumbing Supplies & Equipment and Industrial P-V-F Firms," although increasing their leverage in 1988 to 81.4%, continue to be the most conservatively financed of the four industry segments.

- Liquidity (as measured by current assets minus inventory to current debt, sometimes called the "quick ratio") has remained fairly constant for the typical industry firm over the last eight years, and 1988 was no exception. It is interesting to note that "Plumbing Supplies & Equipment Firms," in addition to significantly increasing their **leverage** position, experienced a fairly large decrease in **liquidity**. This may signify this industry segment as a whole could be suffering from cash flow troubles, and has relied on more debt-financing to temporarily ease the strain.

EXPENSE AND PROFIT TRENDS (MARGIN MANAGEMENT)

While financial management, receivables management and productivity are all important to a company's success, the area of operations that typically receive the most managerial attention on a regular basis are expenses and bottom line profitability. Most owners and key managers receive and scrutinize income statement (i.e., P&L) performance results from their accountant, bookkeeper, or computer system on a routine basis. As a result, watching and controlling expenses and bottom line profit margins is usually foremost in their minds.

The charts on the next few pages graphically highlight the 1981-1988 P-H-C-P wholesaler expense and margin trends relative to sales. Of special note:

- Bottom line profit margins again increased in 1988 for all reporting P-H-C-P wholesalers (1.9% in 1988 vs. 1.7% in 1987, and 1.5% the previous two years). This resulted from a small increase in gross margins, as well as better expense control.

- The highest profit margins in 1988 were experienced by "Industrial P-V-F Firms" (2.8%), a healthy increase from the 1.5% earned in 1987. This was due to both an increase in gross margin levels, as well as lower operating expenses relative to sales.

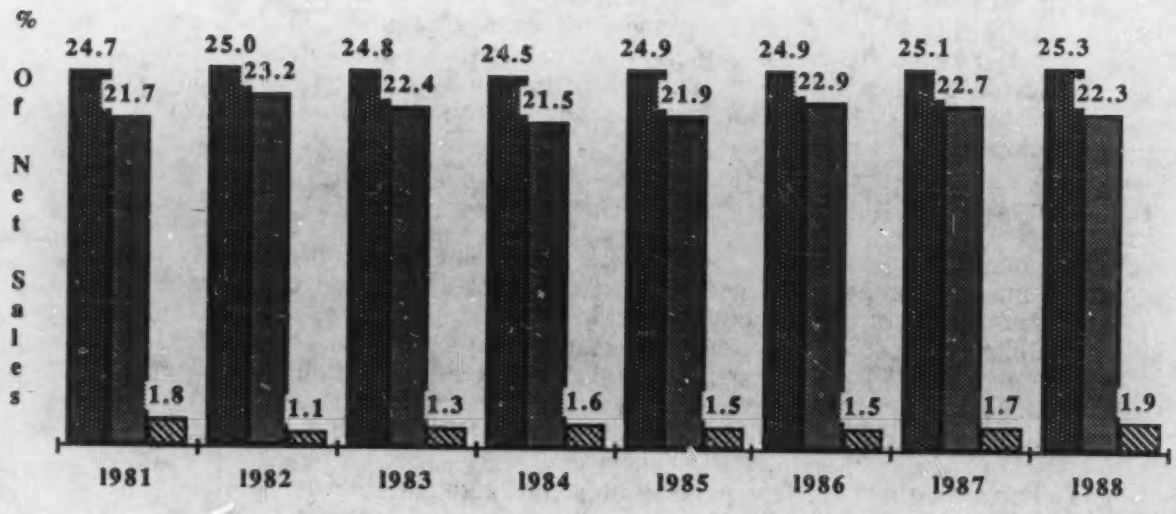
- "Plumbing Supplies & Equipment Firms" experienced a small increase in profit margins, thanks to constant gross margin levels and more efficient expense control. Those firms classified as "Plumbing Supplies & Equipment and Industrial P-V-F" likewise achieved increases in profit levels, but due more to increased gross margins.

- "HVAC and Other Emphasis Firms," although lowering expense levels relative to sales, could not overcome decreases in gross margin levels, and therefore suffered a slight profit margin decrease.

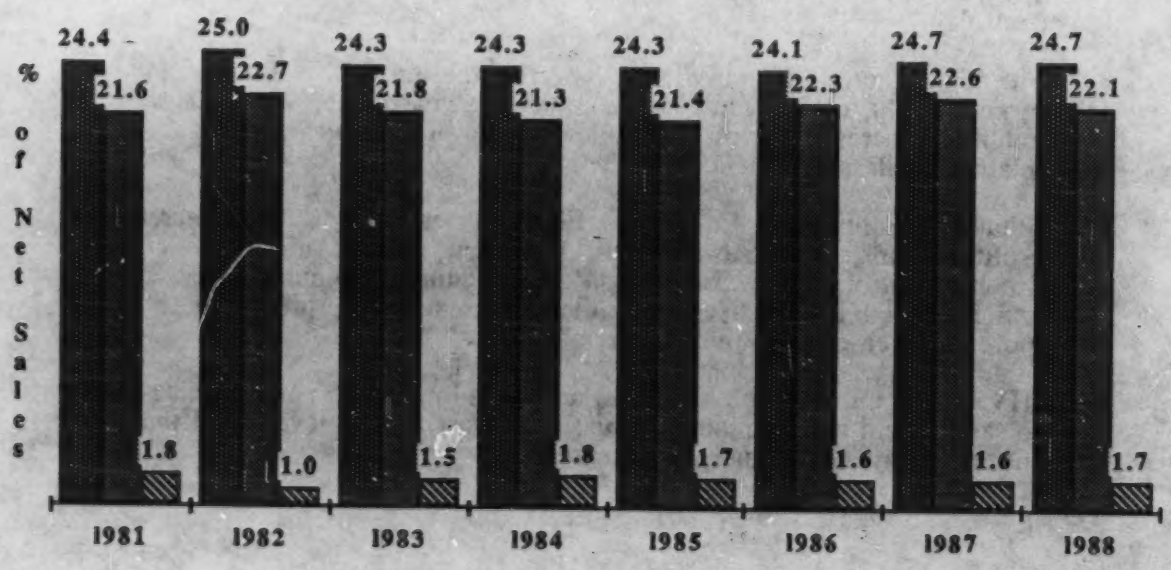
EIGHT YEAR EXPENSE & PROFIT TRENDS
(1981-1988)

■ Gross Margin ■ Operating Expense ▧ Net Profit After Tax

ALL REPORTING P-H-C-P AND P-V-F WHOLESALER/DISTRIBUTORS



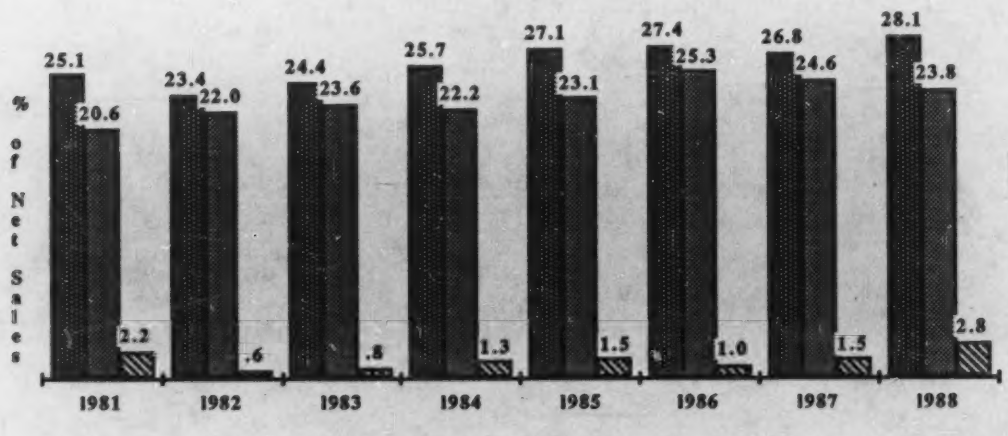
PLUMBING SUPPLIES & EQUIPMENT FIRMS



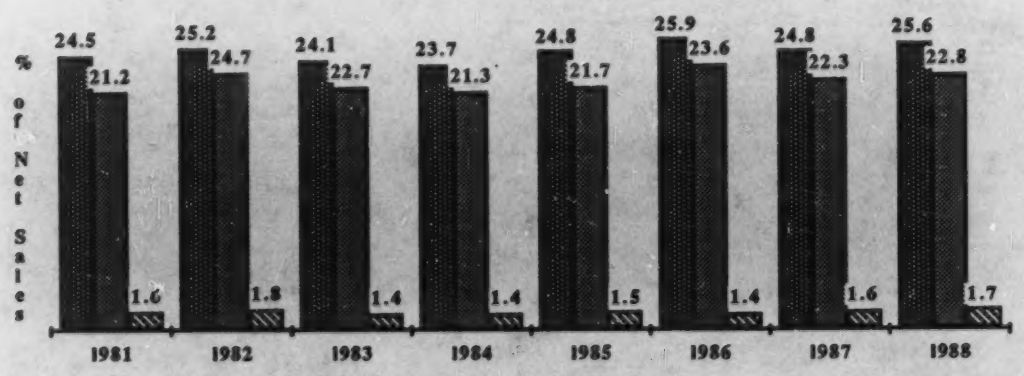
EIGHT YEAR EXPENSE & PROFIT TRENDS (1981-1988)

Gross Margin | Operating Expense | Net Profit After Tax

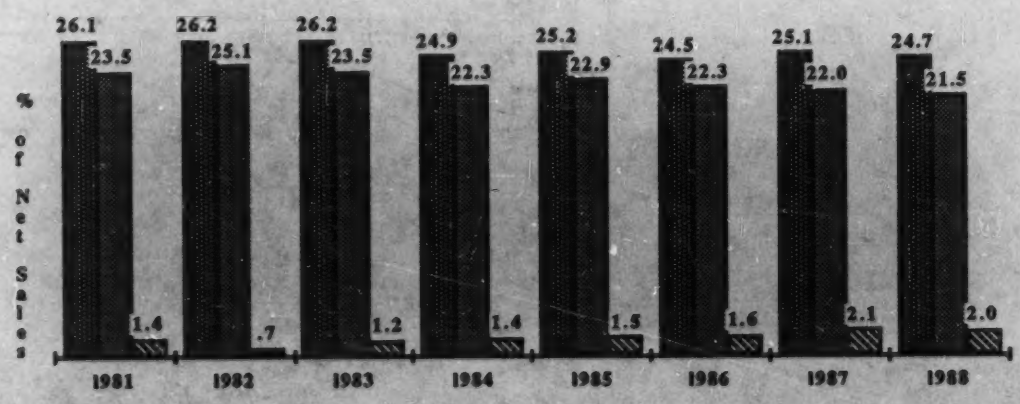
INDUSTRIAL P-V-F FIRMS



PLUMBING SUPPLIES & EQUIPMENT AND INDUSTRIAL P-V-F FIRMS



HVAC & OTHER EMPHASIS FIRMS

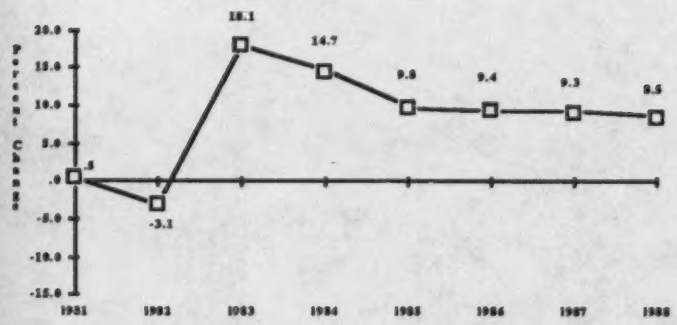


SALES PERFORMANCE

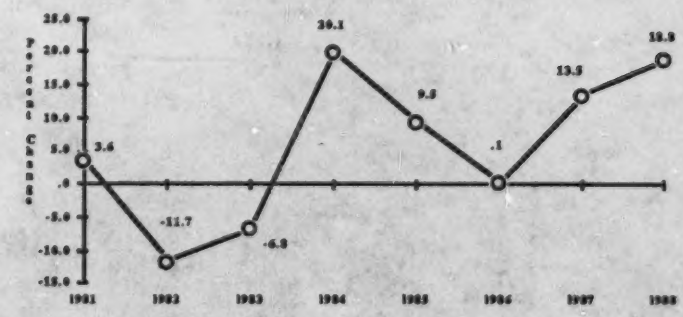
The accompanying "sales performance" graphs highlight the pattern of sales increases for each group of P-H-C-P wholesalers over the past eight years. As the charts show, "Industrial P-V-F Firms" achieved the highest sales growth rate in 1988 (18.8%), only two years after experiencing nearly no sales increase whatsoever. "HVAC and Other Emphasis Firms" also experienced above average increases in sales (13.0%), while other industry segments reported a slowing of growth since 1987.

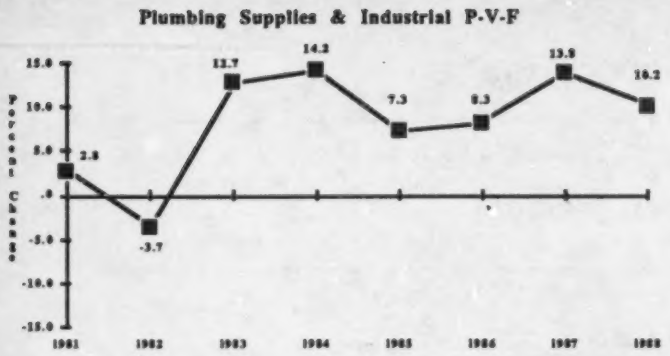
SALES PERFORMANCE
Percent Sales Change from Prior Year
1981-1988

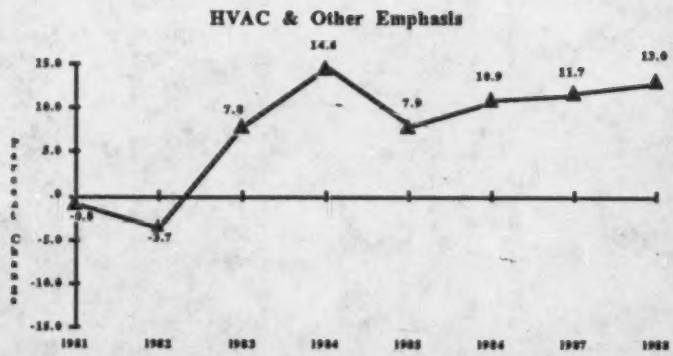
Plumbing Supplies & Equipment



Industrial P-V-F

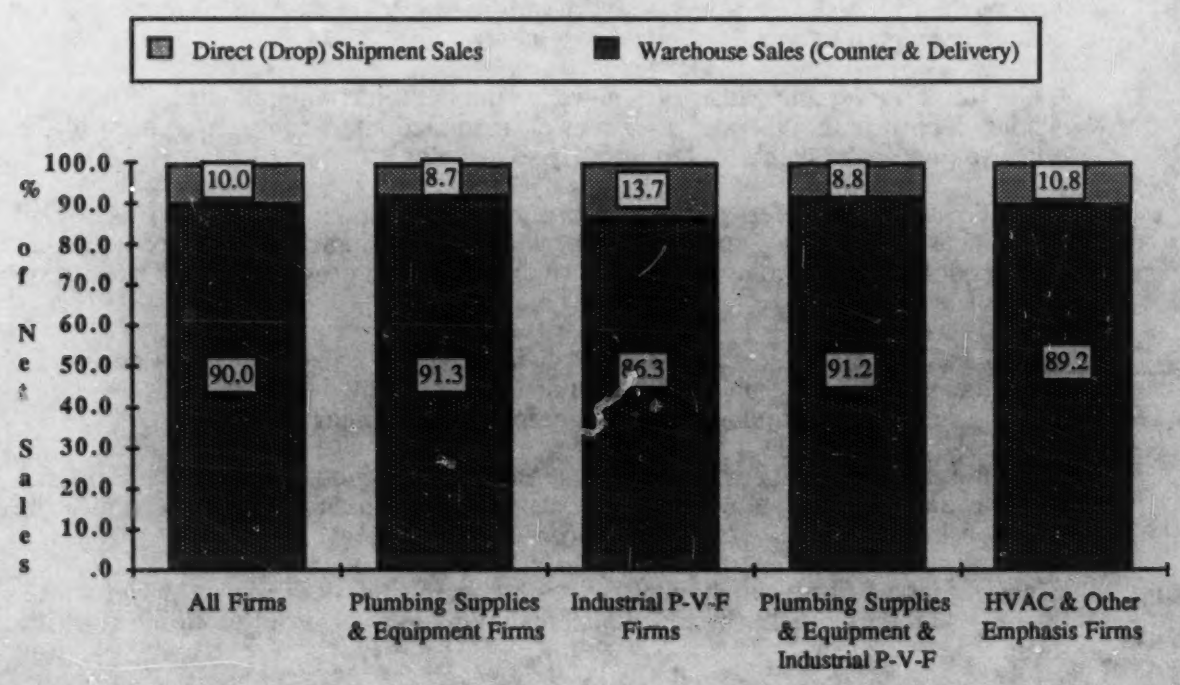




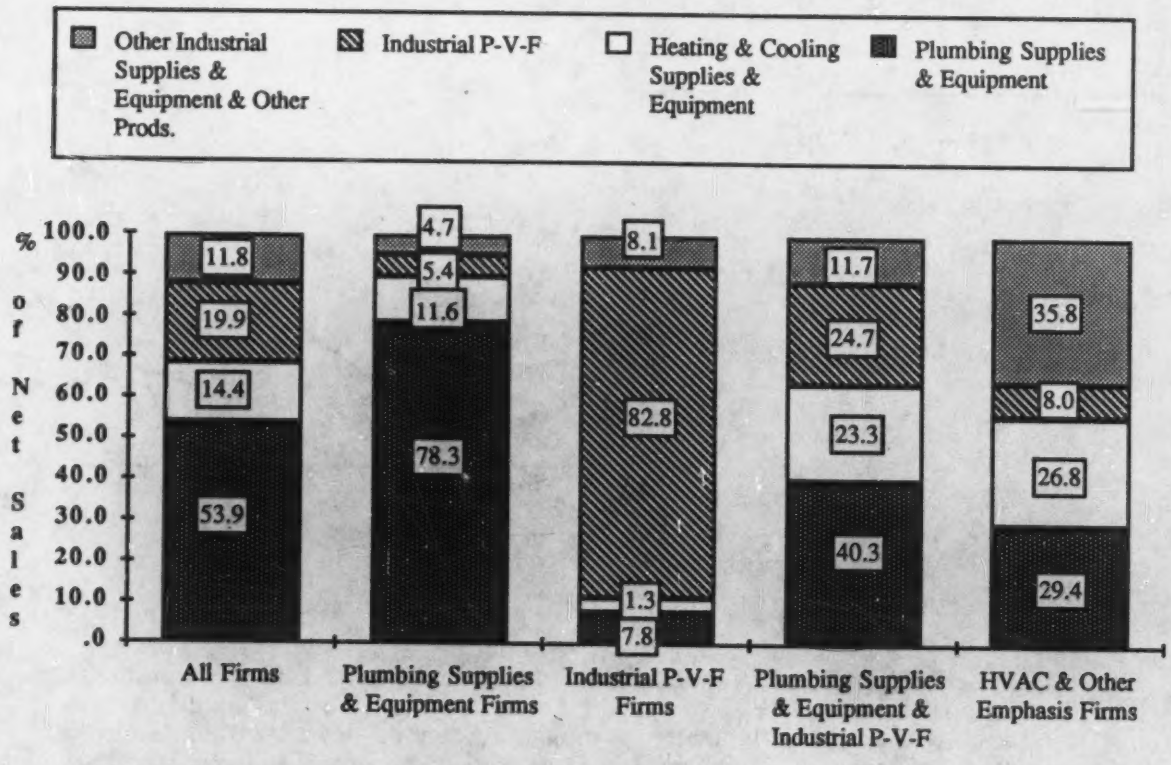


For your reference, additional insights into the make-up of P-H-C-P wholesale sales by type of operator are shown in the accompanying "sales mix" and "product mix" tables. These charts indicate the mix of direct or drop shipment sales versus warehouse (counter and delivery) sales, as well as the mix of sales by broad product category.

SALES MIX



PRODUCT MIX



PROFITABILITY COMPARISON--1988 VS 1987

Each year's ASA *Operating Performance Report* contains a special analysis showing industry profitability based on "return on net worth." This single measure essentially summarizes all the key components of profitability: margin management, asset management and financial policy management.

The exhibit on the following page shows the overall return on net worth of P-H-C-P wholesalers in both 1988 and 1987 as well as the combined impact of each of the three "pathways" to high profitability. These include:

- **Profit Margin** refers to net profit (after tax) divided by net sales. It is a good measure of margin management because in order to achieve an acceptable net profit margin, a company must earn an acceptable gross margin while keeping expenses in line.

- **Asset Turnover** depicts net sales divided by total assets. This is an overall measure of asset management, showing how many dollars in sales are being generated by each dollar of assets employed in running the business.

- **Financial Leverage** is derived from total assets divided by net worth. Financial leverage is nothing more than the degree to which debt is used to finance the business as opposed to net worth (owner's investment).

Since the above three components multiply together to yield return on net worth, increases in any of these three components improves the overall profitability of the firm.

P-H-C-P WHOLESALER TWO YEAR STRATEGIC PROFIT MODEL RATIOS

(1988 VS 1987)

How to Interpret

Profit Margin (1988 / 1987) x Asset Turns (1988 / 1987) → Return on Assets (1988 / 1987) x Financial Leverage (1988 / 1987) = Return on Net Worth (1988 / 1987)

Note: Mathematical relationships may not total due to rounding.

Plumbing Supplies & Equipment Firms

1.7% / 1.6%	2.7x / 2.6x	4.6% / 4.3%	2.4x / 2.1x	12.4% / 10.2%

Industrial P-V-F Firms

2.8% / 1.5%	2.8x / 2.7x	8.2% / 4.6%	2.1x / 2.1x	15.4% / 9.8%

Plumbing Supplies & Equipment and Industrial P-V-F Firms

1.7% / 1.6%	2.7x / 2.7x	5.0% / 4.7%	1.8x / 1.8x	8.1% / 8.9%

HVAC & Other Emphasis Firms

2.0% / 2.1%	2.7x / 2.4x	5.7% / 4.7%	1.9x / 2.1x	11.3% / 10.3%

ALL REPORTING FIRMS

1.9% / 1.7%	2.7x / 2.6x	5.6% / 4.5%	2.1x / 2.0x	12.5% / 9.8%

Based on the profit models shown for each of the various types of P-H-C-P wholesalers, several overall insights are apparent:

- Overall profitability during 1988 (as measured by return on net worth) increased for all P-H-C-P wholesalers in the aggregate (12.5% in 1988 vs. 9.8% in 1987). This significant increase was caused by several, smaller gains in the three component areas. As profit margins increased slightly, so did asset turnover. This combined to cause "return on assets" to increase from 4.5% to 5.6%. This effect, along with slightly higher financial leverage caused the overall favorable result in return on net worth.

- This general pattern held true for most industry segments, with three out of four achieving higher return on net worth in 1988 than in 1987.

CHARACTERISTICS OF "WINNING PERFORMANCE"

One of the primary purposes of each year's *Operating Performance Report* is to help P-H-C-P wholesale/distributors improve their performance. A useful tool for accomplishing this is to study the performance characteristics of the most successful firms in the industry (i.e., the "winning firms"), and then strive to emulate such performance.

Perhaps, therefore, the most important set of statistics contained in each year's *Operating Performance Report* is the "High Profit Firm" results. Essentially, this is a special data grouping of the most profitable companies (on the basis of before tax return on assets) in each product emphasis group.

It should be understood that not all highly profitable companies will exhibit the characteristics indicated by the accompanying "high profit" firm data. However, it is an excellent idea to focus attention on the characteristics of these profit leaders in order to help identify which business activities might yield the biggest profitability boost to your firm.

The accompanying table: "High Profit vs. Typical Firm Performance Comparison" is a summary of the key indicators of profitability, showing the results of the "High Profit Firms" as compared to the typical or median company performance. While there are certainly many differences on a company by company basis in what highly profitable companies do to be profitable, some generalizations are possible from the aggregate results provided in this study. In particular:

- The "High Profit Firms" in each of the four product emphasis categories experienced higher sales increases than the "typical" firm in their respective categories.

- High profit performers consistently achieved higher gross margin levels, and faster "inventory turnover" (as measured by "total cost of goods sold to average inventory") than the typical firm, resulting in a superior "warehouse gross margin return on average inventory." This means that those firms which emphasized greater discretion in inventory management and pricing & purchasing decisions tended to achieve higher profitability in 1988.

- Overall, high profit firms exercised greater expense control relative to their sales volume than did the typical firm in 1988.

- High profit firms achieved greater personnel productivity than the typical firm (as measured by "net sales per employee"), indicating these firms are more highly leveraged from a personnel perspective.

- "Total debt to net worth" was significantly lower for high profit firms in 1988, emphasizing that firms which are less highly leveraged tend to be more profitable. Also, high profit firms tend to be more liquid than the industry average.

1988 High Profit vs. "Typical Firm" Performance Comparison

	Plumbing Supplies & Equipment ---Firms---		Industrial P-V-F ---Firms---		Plumbing Supplies & Equipment & Industrial ---P-V-F Firms---		HVAC & Other Emphasis ---Firms---		
	Typical	High Profit	Typical	High Profit	Typical	High Profit	Typical	High Profit	All Firms
Profitability									
Net Profit (After Tax) to Total Assets	4.6%	8.8%	8.2%	11.5%	5.0%	8.6%	5.7%	9.4%	5.6%
Net Profit (After Tax) to Net Worth	12.4%	17.1%	15.4%	19.9%	8.1%	14.6%	11.3%	14.5%	12.5%
Net Profit (After Tax) to Net Sales	1.7%	3.6%	2.8%	3.7%	1.7%	2.8%	2.0%	3.4%	1.9%
Asset and Financial Management									
Net Sales to Total Assets	2.7x	2.7x	2.8x	3.1x	2.7x	2.7x	2.7x	2.8x	2.7x
Total Debt to Net Worth	136.1%	95.4%	110.4%	110.4%	81.4%	74.1%	92.1%	51.0%	110.6%
Current Assets to Current Debt	2.1x	2.6x	2.2x	2.5x	2.5x	2.0x	2.5x	2.8x	2.2x
Personnel Productivity									
Net Sales/Employee (000)	$222.2	$233.4	$251.5	$252.0	$202.5	$213.6	$217.7	$223.6	$220.9
Payroll & Fringe Benefits to Net Sales	13.7%	13.5%	15.1%	14.9%	15.2%	14.1%	13.0%	13.5%	13.9%
Inventory Management									
Gross Margin on Net Sales	24.7%	25.8%	28.1%	30.2%	25.6%	26.8%	24.7%	26.2%	25.3%
Gross Margin on Direct Shipments	11.0%	11.8%	17.6%	13.2%	11.0%	10.0%	13.4%	13.9%	12.0%
Gross Margin on Warehouse Sales	25.4%	25.6%	27.8%	27.9%	25.9%	25.0%	23.9%	25.8%	25.6%
Cost of Warehouse Goods Sold to Average Inventory	3.7x	3.7x	4.2x	4.2x	4.1x	4.5x	3.6x	4.0x	3.7x
% Warehouse Sales from Non-Stock Items	8.0%	7.5%	25.0%	30.0%	15.0%	11.0%	7.6%	6.7%	10.0%
Cost of In-Stock Warehouse Sales to Average Inventory	3.4x	3.6x	3.3x	3.3x	3.1x	3.1x	3.5x	3.8x	3.4x
Total Cost of Goods Sold to Average Inventory	4.4x	4.7x	4.9x	5.1x	4.6x	4.6x	4.3x	4.5x	4.5x
Warehouse Gross Margin Return on Average Inventory	126%	131%	159%	159%	137%	144%	120%	151%	131%
Accounts Receivable									
Average Collection Period (Days)	52	52	46	46	50	50	44	44	49
Operating Expenses (% of Net Sales)									
Selling Expenses	5.3%	5.2%	7.0%	7.6%	6.4%	6.2%	6.4%	5.9%	6.0%
Delivery Expenses	1.9%	1.8%	1.8%	1.9%	1.7%	1.7%	1.7%	1.6%	1.8%
Warehouse Expenses	2.4%	2.1%	2.6%	3.1%	2.8%	2.6%	2.5%	2.6%	2.5%
General & Admin. Expenses	9.5%	9.2%	9.7%	9.9%	9.8%	10.1%	8.7%	8.3%	9.4%
Occupancy Expenses	2.2%	2.0%	1.8%	1.9%	1.7%	1.8%	1.7%	1.8%	2.0%
Total Operating Expenses	22.1%	21.4%	23.8%	24.4%	22.8%	22.7%	21.5%	20.9%	22.3%
Sales Performance									
Percent Sales Change from Prior Year	8.5%	9.4%	18.8%	18.8%	10.2%	12.1%	13.0%	17.1%	11.3%

PLUMBING SUPPLIES & EQUIPMENT FIRMS

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	12.4%	6.0 - 18.9%
Total Assets to Net Worth	2.4X	1.6 - 3.2X
Net Profit After Tax to Total Assets	4.6%	2.5 - 8.7%
Net Sales to Total Assets	2.7X	2.3 - 3.0X
Net Profit After Tax to Net Sales	1.7%	0.8 - 3.6%
Net Profit Before Tax to Net Worth	16.8%	7.9 - 23.8%
Net Profit Before Tax to Total Assets	6.2%	2.9 - 11.1%
EBIT to Total Assets	9.6%	6.5 - 14.0%
SALES ANALYSIS		
Net Sales($000)	$6,947	$4,310 - 13,254
Percent Sales Change from Prior Year	8.5%	3.4 - 16.2%
Sales Mix:		
Direct Sales	8.7%	2.1 - 12.4%
Warehouse Sales - Counter and Delivery	91.3%	87.5 - 97.4%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	78.3%	63.7 - 95.0%
Heating & Cooling Supplies & Equipment	11.6%	0.0 - 20.0%
Industrial P-V-F (Pipes-Valves-Fittings)	5.4%	0.0 - 8.0%
Other Industrial Supplies & Equipment	1.3%	0.0 - 0.0%
Other Products	3.3%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.7%	21.5 - 27.7%
Gross Margin on Direct Shipments	11.0%	8.6 - 15.0%
Gross Margin on Warehouse Sales	25.4%	22.7 - 28.0%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.08X	2.62 - 3.52X
Total Debt to Net Worth	136.1%	62.1 - 223.9%
Current Debt to Net Worth	95.9%	50.5 - 181.9%
Current Assets to Current Debt	2.08X	1.56 - 2.91X
Current Assets Minus Inventory/Curr Debt	0.94X	0.69 - 1.41X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	5.0 - 8.0
Average Invoice Size	$176	$122 - 251
Average Billing Line	$29.87	$20.11 - 43.28

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$222,209	$188,894 - 276,041
Gross Margin Per Employee	$53,556	$45,831 - 68,607
Average Compensation Per Employee	$25,830	$22,525 - 31,849
Average Fringe Benefits Per Employee	$4,577	$3,462 - 5,843
Compensation & Fringes Per Employee	$29,944	$25,905 - 37,845
Payroll to Net Sales	11.7%	10.2 - 13.1%
Fringe Benefits to Net Sales	1.9%	1.5 - 2.4%
Payroll & Fringes to Net Sales	13.7%	11.9 - 15.6%
Payroll to Gross Margin	48.5%	43.5 - 52.2%
Fringe Benefits to Gross Margin	8.2%	6.4 - 9.9%
Payroll & Fringes to Gross Margin	57.2%	51.4 - 62.0%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.72X	3.02 - 4.70X
% of Whse Sales from Non-Stock Items	8.0%	5.0 - 15.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.42X	2.60 - 4.43X
No. of Days Average Inventory Carried	98 Days	77 - 119 Days
Total Cost of Goods Sold to Ave Inventory	4.35X	3.32 - 5.57X
Whse Gross Margin Return on Ave Inventory	126%	106 - 156%
Turn & Earn Profitability Index	91%	78 - 115%
Percent of Firms on LIFO	43.1%	
ACCOUNTS RECEIVABLE		
Average Collection Period	52 Days	44 - 60 Days
Gross Margin Return on Receivables	165%	144 - 197%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	62.6%	54.0 - 70.0%
31-60 Days Outstanding	17.1%	13.2 - 20.7%
61-90 Days Outstanding	8.1%	5.0 - 10.0%
Over 90 Days Outstanding	12.3%	5.9 - 18.0%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,736	$1,032 - 2,490
31-60 Days Outstanding	$1,872	$1,072 - 3,432
61-90 Days Outstanding	$1,846	$1,172 - 3,855
Over 90 Days Outstanding	$2,157	$1,435 - 3,963
Total	$1,740	$1,010 - 2,380
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	68.2%	57.5 - 79.6%
31-60 Days Outstanding	16.6%	11.9 - 20.6%
61-90 Days Outstanding	6.9%	4.0 - 9.3%
Over 90 Days Outstanding	8.3%	4.4 - 11.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.3%	72.3 - 78.5%
Gross Margin	24.7%	21.5 - 27.7%
Operating Expenses:		
Selling Expenses	5.3%	3.8 - 6.9%
Delivery Expenses	1.9%	1.2 - 2.3%
Warehouse Expenses	2.4%	1.3 - 3.2%
General & Administrative Expenses	9.5%	7.0 - 11.7%
Occupancy Expenses	2.2%	1.3 - 2.9%
Other Operating Expenses	0.9%	0.0 - 0.5%
Total Operating Expenses	22.1%	18.9 - 25.1%
Net Operating Profit	2.6%	1.2 - 4.1%
Non-Operating Income	2.0%	1.3 - 2.7%
Non-Operating Expenses	1.8%	0.8 - 2.7%
Net Profit Before Tax	2.8%	1.0 - 4.1%
Net Profit After Tax	1.7%	0.8 - 3.6%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.1%	18.9 - 25.1%
Total Operating Expense to Gross Margin	89.8%	83.6 - 95.3%
Non-People Expense to Net Sales	8.2%	6.5 - 9.1%
Non-People Expense to Gross Margin	33.0%	27.2 - 36.3%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.5 - 1.6%
Times Interest Earned	4.0X	2.1 - 7.3X
BALANCE SHEET		
Cash	5.6%	0.7 - 5.5%
Accounts & Notes Receivable, Trade(Net)	34.0%	27.1 - 41.0%
Inventory	46.3%	38.5 - 53.7%
Other Current Assets	1.4%	0.2 - 1.6%
Total Current Assets	87.3%	81.6 - 93.4%
All Other Assets	12.8%	6.6 - 18.0%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	42.9%	30.7 - 57.6%
Total Long-Term Liabilities	11.8%	1.1 - 19.8%
Total Liabilities	54.7%	38.3 - 69.1%
Total Net Worth	45.3%	30.8 - 61.2%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES UNDER $4,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	8.6%	2.5 - 23.3%
Total Assets to Net Worth	2.1X	1.5 - 3.5X
Net Profit After Tax to Total Assets	5.3%	1.9 - 8.7%
Net Sales to Total Assets	2.6X	2.3 - 2.8X
Net Profit After Tax to Net Sales	2.0%	0.7 - 3.8%
Net Profit Before Tax to Net Worth	12.1%	4.6 - 31.4%
Net Profit Before Tax to Total Assets	6.1%	1.9 - 10.8%
EBIT to Total Assets	8.6%	4.6 - 14.0%
SALES ANALYSIS		
Net Sales($000)	$2,427	$1,699 - 3,199
Percent Sales Change from Prior Year	7.7%	4.0 - 15.5%
Sales Mix:		
Direct Sales	4.7%	0.0 - 8.9%
Warehouse Sales - Counter and Delivery	95.3%	90.6 - 99.6%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	84.9%	80.0 - 97.0%
Heating & Cooling Supplies & Equipment	7.4%	0.0 - 10.0%
Industrial P-V-F (Pipes-Valves-Fittings)	3.3%	0.0 - 5.0%
Other Industrial Supplies & Equipment	0.6%	0.0 - 0.0%
Other Products	3.9%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.1%	21.5 - 29.5%
Gross Margin on Direct Shipments	12.0%	5.3 - 20.0%
Gross Margin on Warehouse Sales	25.9%	19.9 - 29.3%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.70X	2.55 - 3.23X
Total Debt to Net Worth	110.9%	46.4 - 245.8%
Current Debt to Net Worth	67.7%	23.4 - 175.2%
Current Assets to Current Debt	2.18X	1.53 - 4.39X
Current Assets Minus Inventory/Curr Debt	0.86X	0.71 - 1.86X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.1	5.0 - 6.9
Average Invoice Size	$105	$97 - 150
Average Billing Line	$19.64	$16.11 - 29.15

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES UNDER $4,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$197,921	$160,100 - 211,101
Gross Margin Per Employee	$46,401	$41,796 - 53,435
Average Compensation Per Employee	$22,830	$19,416 - 24,567
Average Fringe Benefits Per Employee	$3,398	$2,538 - 4,719
Compensation & Fringes Per Employee	$25,905	$22,114 - 28,306
Payroll to Net Sales	12.9%	9.9 - 14.4%
Fringe Benefits to Net Sales	2.0%	1.2 - 2.7%
Payroll & Fringes to Net Sales	14.0%	11.2 - 17.3%
Payroll to Gross Margin	48.0%	45.3 - 52.0%
Fringe Benefits to Gross Margin	7.3%	5.7 - 9.7%
Payroll & Fringes to Gross Margin	53.3%	50.3 - 59.6%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.52X	3.01 - 3.82X
% of Whse Sales from Non-Stock Items	8.0%	5.0 - 14.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.37X	2.78 - 3.77X
No. of Days Average Inventory Carried	104 Days	87 - 121 Days
Total Cost of Goods Sold to Ave Inventory	3.82X	3.24 - 4.84X
Whse Gross Margin Return on Ave Inventory	126%	101 - 157%
Turn & Earn Profitability Index	91%	74 - 111%
Percent of Firms on LIFO	18.2%	
ACCOUNTS RECEIVABLE		
Average Collection Period	52 Days	39 - 61 Days
Gross Margin Return on Receivables	159%	118 - 269%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	61.4%	54.0 - 68.1%
31-60 Days Outstanding	15.6%	12.6 - 19.4%
61-90 Days Outstanding	8.9%	4.3 - 13.5%
Over 90 Days Outstanding	14.2%	7.6 - 19.7%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$735	$606 - 1,297
31-60 Days Outstanding	$954	$585 - 1,106
61-90 Days Outstanding	$1,081	$656 - 1,425
Over 90 Days Outstanding	$1,592	$1,260 - 2,094
Total	$819	$610 - 1,573
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	68.2%	56.7 - 77.1%
31-60 Days Outstanding	15.8%	12.4 - 20.3%
61-90 Days Outstanding	7.3%	3.6 - 9.6%
Over 90 Days Outstanding	8.7%	3.0 - 12.1%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES UNDER $4,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.0%	70.2 - 77.4%
Gross Margin	26.1%	21.5 - 29.5%
Operating Expenses:		
Selling Expenses	5.7%	3.5 - 8.1%
Delivery Expenses	2.0%	1.3 - 2.2%
Warehouse Expenses	2.4%	1.1 - 2.7%
General & Administrative Expenses	10.4%	7.1 - 13.1%
Occupancy Expenses	2.3%	1.4 - 2.9%
Other Operating Expenses	0.9%	0.0 - 0.3%
Total Operating Expenses	23.7%	18.6 - 27.3%
Net Operating Profit	2.4%	-0.0 - 4.7%
Non-Operating Income	1.8%	1.3 - 2.4%
Non-Operating Expenses	1.7%	0.0 - 2.1%
Net Profit Before Tax	2.5%	0.7 - 4.0%
Net Profit After Tax	2.0%	0.7 - 3.8%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	23.7%	18.6 - 27.3%
Total Operating Expense to Gross Margin	91.4%	82.4 - 98.2%
Non-People Expense to Net Sales	9.7%	7.5 - 10.4%
Non-People Expense to Gross Margin	37.2%	27.9 - 40.7%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.4 - 1.4%
Times Interest Earned	4.0X	1.3 - 7.3X
BALANCE SHEET		
Cash	7.5%	1.2 - 14.5%
Accounts & Notes Receivable, Trade(Net)	31.2%	22.8 - 38.4%
Inventory	49.4%	41.7 - 55.3%
Other Current Assets	0.8%	0.1 - 1.0%
Total Current Assets	88.8%	81.6 - 95.8%
All Other Assets	11.2%	3.8 - 17.3%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	40.2%	18.8 - 59.4%
Total Long-Term Liabilities	11.9%	0.0 - 21.0%
Total Liabilities	52.0%	31.7 - 77.3%
Total Net Worth	48.0%	22.4 - 68.1%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $4,000,000 TO $7,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	11.2%	6.0 - 16.3%
Total Assets to Net Worth	2.2X	1.6 - 3.0X
Net Profit After Tax to Total Assets	4.7%	2.5 - 9.1%
Net Sales to Total Assets	2.7X	2.3 - 3.1X
Net Profit After Tax to Net Sales	1.7%	0.7 - 3.2%
Net Profit Before Tax to Net Worth	12.6%	7.0 - 22.0%
Net Profit Before Tax to Total Assets	6.3%	2.7 - 10.5%
EBIT to Total Assets	8.8%	6.3 - 13.1%
SALES ANALYSIS		
Net Sales($000)	$4,948	$4,720 - 5,858
Percent Sales Change from Prior Year	10.4%	-2.0 - 14.7%
Sales Mix:		
Direct Sales	10.3%	2.1 - 12.5%
Warehouse Sales - Counter and Delivery	89.7%	87.5 - 97.9%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	78.4%	64.0 - 95.0%
Heating & Cooling Supplies & Equipment	12.0%	0.0 - 25.0%
Industrial P-V-F (Pipes-Valves-Fittings)	6.1%	0.0 - 10.0%
Other Industrial Supplies & Equipment	1.6%	0.0 - 0.0%
Other Products	1.9%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.1%	22.4 - 26.7%
Gross Margin on Direct Shipments	11.0%	9.2 - 12.5%
Gross Margin on Warehouse Sales	25.9%	23.7 - 28.9%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.10X	2.73 - 3.59X
Total Debt to Net Worth	118.5%	56.6 - 197.7%
Current Debt to Net Worth	93.4%	50.2 - 153.7%
Current Assets to Current Debt	2.13X	1.60 - 2.87X
Current Assets Minus Inventory/Curr Debt	1.08X	0.84 - 1.41X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	5.0 - 9.5
Average Invoice Size	$200	$137 - 287
Average Billing Line	$31.08	$19.35 - 43.28

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $4,000,000 TO $7,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$240,453	$190,297 - 292,997
Gross Margin Per Employee	$62,105	$46,983 - 70,131
Average Compensation Per Employee	$29,795	$23,241 - 34,124
Average Fringe Benefits Per Employee	$4,789	$4,032 - 6,718
Compensation & Fringes Per Employee	$34,548	$28,136 - 40,138
Payroll to Net Sales	12.3%	10.6 - 13.1%
Fringe Benefits to Net Sales	2.0%	1.6 - 2.9%
Payroll & Fringes to Net Sales	14.2%	12.3 - 15.8%
Payroll to Gross Margin	48.8%	46.2 - 54.0%
Fringe Benefits to Gross Margin	8.6%	6.4 - 10.2%
Payroll & Fringes to Gross Margin	57.5%	53.7 - 62.7%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.73X	3.50 - 4.70X
% of Whse Sales from Non-Stock Items	5.0%	3.0 - 14.1%
Cost of In-Stock Whse Sales/Ave Inventory	3.61X	3.01 - 4.70X
No. of Days Average Inventory Carried	95 Days	69 - 104 Days
Total Cost of Goods Sold to Ave Inventory	4.83X	3.58 - 6.62X
Whse Gross Margin Return on Ave Inventory	132%	119 - 156%
Turn & Earn Profitability Index	97%	89 - 132%
Percent of Firms on LIFO	31.3%	
ACCOUNTS RECEIVABLE		
Average Collection Period	51 Days	43 - 59 Days
Gross Margin Return on Receivables	170%	146 - 211%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	60.2%	49.0 - 65.7%
31-60 Days Outstanding	18.8%	14.7 - 22.1%
61-90 Days Outstanding	8.3%	4.8 - 9.7%
Over 90 Days Outstanding	12.8%	6.9 - 18.2%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,517	$917 - 2,598
31-60 Days Outstanding	$1,819	$1,072 - 2,624
61-90 Days Outstanding	$1,481	$1,054 - 3,359
Over 90 Days Outstanding	$1,918	$1,314 - 3,138
Total	$1,460	$934 - 2,989
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	65.4%	55.0 - 71.6%
31-60 Days Outstanding	19.0%	11.8 - 23.1%
61-90 Days Outstanding	7.4%	4.6 - 9.3%
Over 90 Days Outstanding	8.2%	4.1 - 10.2%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $4,000,000 TO $7,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.9%	72.4 - 77.3%
Gross Margin	25.1%	22.4 - 26.7%
Operating Expenses:		
Selling Expenses	5.1%	3.5 - 6.1%
Delivery Expenses	1.9%	0.9 - 2.5%
Warehouse Expenses	2.1%	1.0 - 2.9%
General & Administrative Expenses	10.0%	7.5 - 12.7%
Occupancy Expenses	2.0%	1.1 - 2.6%
Other Operating Expenses	1.6%	0.0 - 0.9%
Total Operating Expenses	22.7%	18.7 - 26.2%
Net Operating Profit	2.4%	0.6 - 3.9%
Non-Operating Income	2.0%	0.9 - 2.7%
Non-Operating Expenses	1.7%	1.1 - 2.6%
Net Profit Before Tax	2.6%	0.8 - 4.1%
Net Profit After Tax	1.7%	0.7 - 3.2%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.7%	18.7 - 26.2%
Total Operating Expense to Gross Margin	90.4%	84.8 - 96.1%
Non-People Expense to Net Sales	8.0%	6.2 - 9.8%
Non-People Expense to Gross Margin	31.9%	24.9 - 35.5%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.6%	0.5 - 1.2%
Times Interest Earned	4.8X	2.3 - 7.9X
BALANCE SHEET		
Cash	8.1%	0.7 - 11.9%
Accounts & Notes Receivable, Trade(Net)	34.5%	27.4 - 40.8%
Inventory	42.8%	33.4 - 50.0%
Other Current Assets	1.7%	0.2 - 1.9%
Total Current Assets	87.0%	81.4 - 93.3%
All Other Assets	13.0%	6.4 - 18.0%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	41.8%	30.7 - 50.8%
Total Long-Term Liabilities	10.8%	0.0 - 16.8%
Total Liabilities	52.6%	36.1 - 66.4%
Total Net Worth	47.4%	33.2 - 63.3%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $7,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	12.9%	7.1 - 15.8%
Total Assets to Net Worth	2.4X	1.7 - 3.2X
Net Profit After Tax to Total Assets	5.6%	2.5 - 7.9%
Net Sales to Total Assets	2.8X	2.1 - 3.2X
Net Profit After Tax to Net Sales	1.7%	0.9 - 3.5%
Net Profit Before Tax to Net Worth	18.0%	8.9 - 23.8%
Net Profit Before Tax to Total Assets	6.2%	3.3 - 12.2%
EBIT to Total Assets	9.8%	6.6 - 14.9%
SALES ANALYSIS		
Net Sales($000)	$8,952	$7,748 - 10,157
Percent Sales Change from Prior Year	8.2%	5.2 - 17.5%
Sales Mix:		
Direct Sales	8.3%	4.2 - 12.8%
Warehouse Sales - Counter and Delivery	91.7%	87.2 - 95.8%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	75.0%	60.0 - 86.0%
Heating & Cooling Supplies & Equipment	13.0%	0.0 - 25.0%
Industrial P-V-F (Pipes-Valves-Fittings)	6.3%	0.0 - 6.0%
Other Industrial Supplies & Equipment	1.1%	0.0 - 0.0%
Other Products	4.6%	0.0 - 10.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.1%	22.4 - 26.5%
Gross Margin on Direct Shipments	11.1%	8.7 - 15.5%
Gross Margin on Warehouse Sales	25.5%	22.8 - 26.6%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.06X	2.53 - 3.52X
Total Debt to Net Worth	137.5%	66.8 - 216.3%
Current Debt to Net Worth	101.6%	50.2 - 181.9%
Current Assets to Current Debt	1.95X	1.60 - 2.60X
Current Assets Minus Inventory/Curr Debt	0.87X	0.60 - 1.42X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	5.0 - 7.0
Average Invoice Size	$172	$126 - 231
Average Billing Line	$29.70	$20.91 - 33.45

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $7,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$213,852	$188,894 - 247,855
Gross Margin Per Employee	$50,126	$42,712 - 61,126
Average Compensation Per Employee	$24,336	$21,312 - 27,376
Average Fringe Benefits Per Employee	$3,964	$2,974 - 4,806
Compensation & Fringes Per Employee	$27,802	$25,269 - 32,136
Payroll to Net Sales	11.5%	9.9 - 12.1%
Fringe Benefits to Net Sales	1.7%	1.5 - 2.2%
Payroll & Fringes to Net Sales	13.2%	11.8 - 14.4%
Payroll to Gross Margin	48.1%	42.9 - 52.2%
Fringe Benefits to Gross Margin	7.7%	5.9 - 8.4%
Payroll & Fringes to Gross Margin	55.4%	50.0 - 59.4%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.20X	2.97 - 5.14X
% of Whse Sales from Non-Stock Items	7.5%	5.0 - 15.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.78X	2.54 - 4.51X
No. of Days Average Inventory Carried	87 Days	69 - 122 Days
Total Cost of Goods Sold to Ave Inventory	4.58X	3.32 - 5.71X
Whse Gross Margin Return on Ave Inventory	122%	103 - 147%
Turn & Earn Profitability Index	92%	76 - 104%
Percent of Firms on LIFO	44.8%	
ACCOUNTS RECEIVABLE		
Average Collection Period	51 Days	43 - 60 Days
Gross Margin Return on Receivables	163%	140 - 188%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	67.5%	58.9 - 76.0%
31-60 Days Outstanding	15.0%	10.0 - 17.9%
61-90 Days Outstanding	6.8%	4.0 - 9.2%
Over 90 Days Outstanding	10.7%	4.8 - 15.4%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,916	$1,064 - 2,904
31-60 Days Outstanding	$2,225	$1,215 - 3,817
61-90 Days Outstanding	$2,876	$1,135 - 4,661
Over 90 Days Outstanding	$2,493	$1,760 - 4,072
Total	$1,793	$1,207 - 2,380
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	73.1%	58.8 - 82.3%
31-60 Days Outstanding	14.3%	7.2 - 17.6%
61-90 Days Outstanding	5.5%	2.4 - 6.5%
Over 90 Days Outstanding	7.1%	3.4 - 7.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES $7,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.9%	73.4 - 77.6%
Gross Margin	24.1%	22.4 - 26.5%
Operating Expenses:		
Selling Expenses	5.4%	3.8 - 6.4%
Delivery Expenses	1.5%	1.2 - 1.7%
Warehouse Expenses	2.4%	1.2 - 3.5%
General & Administrative Expenses	9.3%	6.6 - 10.3%
Occupancy Expenses	2.6%	1.7 - 3.0%
Other Operating Expenses	0.4%	0.0 - 0.0%
Total Operating Expenses	21.5%	19.1 - 24.0%
Net Operating Profit	2.7%	1.4 - 3.7%
Non-Operating Income	2.4%	1.7 - 2.9%
Non-Operating Expenses	1.8%	0.8 - 2.7%
Net Profit Before Tax	3.2%	1.0 - 4.5%
Net Profit After Tax	1.7%	0.9 - 3.5%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	21.5%	19.1 - 24.0%
Total Operating Expense to Gross Margin	89.3%	81.2 - 94.1%
Non-People Expense to Net Sales	8.0%	6.2 - 8.5%
Non-People Expense to Gross Margin	33.3%	26.9 - 35.9%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.4 - 1.6%
Times Interest Earned	3.7X	2.3 - 7.0X
BALANCE SHEET		
Cash	5.0%	0.4 - 4.3%
Accounts & Notes Receivable, Trade(Net)	34.2%	25.5 - 41.0%
Inventory	47.3%	38.5 - 55.8%
Other Current Assets	1.5%	0.1 - 1.5%
Total Current Assets	88.0%	86.0 - 92.2%
All Other Assets	12.0%	7.6 - 13.8%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	43.4%	30.2 - 57.5%
Total Long-Term Liabilities	10.2%	1.1 - 19.1%
Total Liabilities	53.6%	40.0 - 68.4%
Total Net Worth	46.4%	30.9 - 59.8%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	13.7%	7.0 - 20.2%
Total Assets to Net Worth	2.9X	1.9 - 3.8X
Net Profit After Tax to Total Assets	3.8%	2.8 - 8.3%
Net Sales to Total Assets	2.7X	2.1 - 3.0X
Net Profit After Tax to Net Sales	1.5%	1.0 - 3.0%
Net Profit Before Tax to Net Worth	19.6%	10.9 - 23.8%
Net Profit Before Tax to Total Assets	6.0%	3.2 - 10.8%
EBIT to Total Assets	9.9%	7.1 - 11.9%
SALES ANALYSIS		
Net Sales($000)	$23,163	$15,980 - 34,644
Percent Sales Change from Prior Year	10.1%	4.4 - 15.9%
Sales Mix:		
Direct Sales	9.9%	5.7 - 13.2%
Warehouse Sales - Counter and Delivery	90.1%	85.3 - 94.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	75.1%	60.0 - 85.0%
Heating & Cooling Supplies & Equipment	13.8%	0.0 - 20.0%
Industrial P-V-F (Pipes-Valves-Fittings)	5.9%	0.0 - 10.0%
Other Industrial Supplies & Equipment	1.6%	0.0 - 2.0%
Other Products	3.5%	0.0 - 2.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	23.7%	20.4 - 26.3%
Gross Margin on Direct Shipments	10.3%	8.4 - 13.2%
Gross Margin on Warehouse Sales	24.7%	22.6 - 26.2%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.14X	2.74 - 3.45X
Total Debt to Net Worth	192.9%	85.7 - 276.1%
Current Debt to Net Worth	103.0%	68.0 - 198.5%
Current Assets to Current Debt	1.94X	1.45 - 2.67X
Current Assets Minus Inventory/Curr Debt	0.86X	0.62 - 1.05X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.2	4.3 - 7.0
Average Invoice Size	$183	$135 - 237
Average Billing Line	$34.72	$26.97 - 45.00

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$266,910	$220,254 - 297,281
Gross Margin Per Employee	$63,204	$48,494 - 70,821
Average Compensation Per Employee	$29,211	$23,754 - 31,849
Average Fringe Benefits Per Employee	$5,198	$4,368 - 6,425
Compensation & Fringes Per Employee	$34,461	$28,046 - 39,250
Payroll to Net Sales	11.2%	10.0 - 12.2%
Fringe Benefits to Net Sales	2.0%	1.7 - 2.6%
Payroll & Fringes to Net Sales	13.1%	11.8 - 14.3%
Payroll to Gross Margin	47.3%	42.3 - 50.4%
Fringe Benefits to Gross Margin	8.8%	7.5 - 10.3%
Payroll & Fringes to Gross Margin	57.6%	50.2 - 59.8%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.59X	2.84 - 4.13X
% of Whse Sales from Non-Stock Items	10.0%	5.0 - 17.3%
Cost of In-Stock Whse Sales/Ave Inventory	3.04X	2.47 - 3.80X
No. of Days Average Inventory Carried	101 Days	88 - 122 Days
Total Cost of Goods Sold to Ave Inventory	4.15X	3.38 - 5.15X
Whse Gross Margin Return on Ave Inventory	116%	94 - 142%
Turn & Earn Profitability Index	88%	76 - 115%
Percent of Firms on LIFO	69.7%	
ACCOUNTS RECEIVABLE		
Average Collection Period	53 Days	47 - 62 Days
Gross Margin Return on Receivables	171%	143 - 179%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	61.2%	53.9 - 66.6%
31-60 Days Outstanding	18.4%	15.7 - 20.7%
61-90 Days Outstanding	8.4%	6.2 - 9.8%
Over 90 Days Outstanding	12.0%	4.5 - 17.6%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$2,241	$1,446 - 3,421
31-60 Days Outstanding	$2,930	$1,824 - 3,465
61-90 Days Outstanding	$2,678	$1,578 - 4,339
Over 90 Days Outstanding	$3,307	$1,747 - 3,963
Total	$2,023	$1,787 - 2,703
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	66.3%	56.6 - 69.6%
31-60 Days Outstanding	17.2%	14.7 - 20.4%
61-90 Days Outstanding	7.4%	5.3 - 8.5%
Over 90 Days Outstanding	9.2%	4.7 - 11.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	76.3%	73.7 - 79.6%
Gross Margin	23.7%	20.4 - 26.3%
Operating Expenses:		
Selling Expenses	5.2%	4.3 - 6.7%
Delivery Expenses	2.0%	1.3 - 2.4%
Warehouse Expenses	2.6%	1.8 - 3.3%
General & Administrative Expenses	8.4%	6.6 - 9.4%
Occupancy Expenses	2.0%	1.3 - 2.7%
Other Operating Expenses	0.6%	0.0 - 0.6%
Total Operating Expenses	20.8%	18.8 - 22.6%
Net Operating Profit	2.9%	1.5 - 4.1%
Non-Operating Income	1.9%	1.3 - 2.4%
Non-Operating Expenses	2.0%	1.0 - 2.7%
Net Profit Before Tax	2.8%	1.2 - 3.7%
Net Profit After Tax	1.5%	1.0 - 3.0%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	20.8%	18.8 - 22.6%
Total Operating Expense to Gross Margin	88.2%	83.9 - 93.3%
Non-People Expense to Net Sales	7.5%	6.5 - 8.0%
Non-People Expense to Gross Margin	31.2%	27.3 - 34.2%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.0%	0.6 - 1.8%
Times Interest Earned	3.1X	2.1 - 4.9X
BALANCE SHEET		
Cash	1.9%	0.4 - 2.7%
Accounts & Notes Receivable, Trade(Net)	35.5%	29.6 - 41.4%
Inventory	46.6%	40.0 - 49.8%
Other Current Assets	1.6%	0.5 - 1.8%
Total Current Assets	85.7%	75.7 - 92.9%
All Other Assets	14.3%	6.7 - 22.8%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	45.9%	31.2 - 60.6%
Total Long-Term Liabilities	14.0%	3.2 - 19.2%
Total Liabilities	59.9%	45.9 - 69.7%
Total Net Worth	40.1%	26.6 - 53.9%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	17.1%	13.4 - 28.8%
Total Assets to Net Worth	2.0X	1.5 - 3.0X
Net Profit After Tax to Total Assets	8.8%	6.6 - 12.7%
Net Sales to Total Assets	2.7X	2.3 - 3.2X
Net Profit After Tax to Net Sales	3.6%	2.3 - 4.8%
Net Profit Before Tax to Net Worth	23.2%	19.6 - 37.2%
Net Profit Before Tax to Total Assets	11.1%	8.8 - 14.9%
EBIT to Total Assets	14.0%	10.6 - 17.4%
SALES ANALYSIS		
Net Sales($000)	$6,797	$4,310 - 11,120
Percent Sales Change from Prior Year	9.4%	4.4 - 18.9%
Sales Mix:		
Direct Sales	8.3%	2.0 - 11.9%
Warehouse Sales - Counter and Delivery	91.7%	87.7 - 97.4%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	76.7%	60.0 - 90.0%
Heating & Cooling Supplies & Equipment	12.8%	0.0 - 21.0%
Industrial P-V-F (Pipes-Valves-Fittings)	5.7%	0.0 - 10.0%
Other Industrial Supplies & Equipment	1.6%	0.0 - 2.0%
Other Products	3.2%	0.0 - 5.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.8%	22.7 - 29.1%
Gross Margin on Direct Shipments	11.8%	8.2 - 16.9%
Gross Margin on Warehouse Sales	25.6%	23.7 - 28.0%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.10X	2.73 - 3.52X
Total Debt to Net Worth	95.4%	51.9 - 197.6%
Current Debt to Net Worth	74.7%	43.0 - 136.1%
Current Assets to Current Debt	2.55X	1.67 - 3.10X
Current Assets Minus Inventory/Curr Debt	1.16X	0.84 - 1.65X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	5.0 - 8.0
Average Invoice Size	$186	$131 - 287
Average Billing Line	$30.43	$19.35 - 41.39

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$233,427	$200,399 - 295,565
Gross Margin Per Employee	$61,943	$48,494 - 75,256
Average Compensation Per Employee	$26,753	$22,924 - 33,367
Average Fringe Benefits Per Employee	$4,577	$3,797 - 5,639
Compensation & Fringes Per Employee	$32,136	$27,106 - 39,250
Payroll to Net Sales	11.8%	10.2 - 12.9%
Fringe Benefits to Net Sales	1.9%	1.5 - 2.4%
Payroll & Fringes to Net Sales	13.5%	11.9 - 15.6%
Payroll to Gross Margin	45.6%	42.3 - 50.7%
Fringe Benefits to Gross Margin	7.4%	6.1 - 9.7%
Payroll & Fringes to Gross Margin	53.7%	49.7 - 59.4%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.74X	3.29 - 5.06X
% of Whse Sales from Non-Stock Items	7.5%	4.0 - 15.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.61X	2.88 - 4.43X
No. of Days Average Inventory Carried	98 Days	72 - 111 Days
Total Cost of Goods Sold to Ave Inventory	4.73X	3.58 - 6.02X
Whse Gross Margin Return on Ave Inventory	131%	119 - 180%
Turn & Earn Profitability Index	97%	89 - 122%
Percent of Firms on LIFO	41.0%	
ACCOUNTS RECEIVABLE		
Average Collection Period	52 Days	44 - 59 Days
Gross Margin Return on Receivables	173%	155 - 211%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	64.1%	55.4 - 71.1%
31-60 Days Outstanding	17.2%	13.3 - 20.9%
61-90 Days Outstanding	8.2%	5.7 - 9.9%
Over 90 Days Outstanding	10.5%	4.4 - 16.6%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,854	$1,032 - 2,598
31-60 Days Outstanding	$2,075	$1,072 - 3,465
61-90 Days Outstanding	$2,007	$1,274 - 4,339
Over 90 Days Outstanding	$2,503	$1,314 - 3,959
Total	$1,787	$1,054 - 2,703
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	70.7%	61.9 - 79.8%
31-60 Days Outstanding	15.9%	10.1 - 20.4%
61-90 Days Outstanding	6.4%	3.5 - 8.8%
Over 90 Days Outstanding	7.0%	2.7 - 8.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & EQUIPMENT FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.2%	70.8 - 77.0%
Gross Margin	25.8%	22.7 - 29.1%
Operating Expenses:		
Selling Expenses	5.2%	3.7 - 6.9%
Delivery Expenses	1.8%	1.1 - 2.1%
Warehouse Expenses	2.1%	1.1 - 2.9%
General & Administrative Expenses	9.2%	6.2 - 10.9%
Occupancy Expenses	2.0%	0.9 - 2.6%
Other Operating Expenses	1.2%	0.0 - 0.9%
Total Operating Expenses	21.4%	18.7 - 23.3%
Net Operating Profit	4.4%	2.5 - 6.1%
Non-Operating Income	2.1%	1.3 - 2.7%
Non-Operating Expenses	1.6%	0.7 - 2.3%
Net Profit Before Tax	4.9%	3.0 - 6.8%
Net Profit After Tax	3.6%	2.3 - 4.8%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	21.4%	18.7 - 23.3%
Total Operating Expense to Gross Margin	82.9%	76.4 - 90.0%
Non-People Expense to Net Sales	7.6%	5.8 - 8.6%
Non-People Expense to Gross Margin	29.2%	24.0 - 35.0%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.8%	0.4 - 1.2%
Times Interest Earned	6.8X	4.5 - 14.4X
BALANCE SHEET		
Cash	7.7%	1.2 - 11.9%
Accounts & Notes Receivable, Trade(Net)	34.0%	25.0 - 43.0%
Inventory	44.0%	36.4 - 52.0%
Other Current Assets	1.3%	0.2 - 1.5%
Total Current Assets	87.0%	82.7 - 93.3%
All Other Assets	13.0%	6.7 - 17.3%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	37.4%	26.8 - 49.0%
Total Long-Term Liabilities	11.3%	0.5 - 18.9%
Total Liabilities	48.7%	34.2 - 66.4%
Total Net Worth	51.3%	33.6 - 65.8%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

INDUSTRIAL P-V-F FIRMS

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	15.4%	11.7 - 26.0%
Total Assets to Net Worth	2.1X	1.6 - 3.1X
Net Profit After Tax to Total Assets	8.2%	5.0 - 11.3%
Net Sales to Total Assets	2.8X	2.4 - 3.4X
Net Profit After Tax to Net Sales	2.8%	1.8 - 3.7%
Net Profit Before Tax to Net Worth	24.3%	13.3 - 33.8%
Net Profit Before Tax to Total Assets	10.4%	5.5 - 15.5%
EBIT to Total Assets	14.0%	11.4 - 17.0%
SALES ANALYSIS		
Net Sales($000)	$7,549	$4,121 - 16,098
Percent Sales Change from Prior Year	18.8%	10.7 - 26.9%
Sales Mix:		
Direct Sales	13.7%	5.0 - 16.7%
Warehouse Sales - Counter and Delivery	86.3%	82.9 - 95.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	7.8%	0.0 - 10.0%
Heating & Cooling Supplies & Equipment	1.3%	0.0 - 0.0%
Industrial P-V-F (Pipes-Valves-Fittings)	82.8%	70.0 - 100.0%
Other Industrial Supplies & Equipment	3.6%	0.0 - 5.0%
Other Products	4.6%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	28.1%	23.5 - 29.4%
Gross Margin on Direct Shipments	17.6%	12.0 - 22.4%
Gross Margin on Warehouse Sales	27.8%	24.4 - 29.8%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.23X	2.87 - 3.81X
Total Debt to Net Worth	110.4%	55.7 - 212.2%
Current Debt to Net Worth	88.0%	41.3 - 155.4%
Current Assets to Current Debt	2.19X	1.69 - 3.10X
Current Assets Minus Inventory/Curr Debt	1.04X	0.79 - 1.42X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.7	3.8 - 6.0
Average Invoice Size	$293	$243 - 453
Average Billing Line	$62.87	$43.12 - 112.82

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$251,503	$198,601 - 296,105
Gross Margin Per Employee	$65,015	$58,994 - 70,539
Average Compensation Per Employee	$29,568	$25,264 - 32,045
Average Fringe Benefits Per Employee	$4,878	$4,077 - 5,997
Compensation & Fringes Per Employee	$34,692	$29,068 - 39,758
Payroll to Net Sales	12.6%	10.8 - 14.5%
Fringe Benefits to Net Sales	2.3%	1.5 - 3.1%
Payroll & Fringes to Net Sales	15.1%	12.8 - 17.3%
Payroll to Gross Margin	46.1%	42.5 - 51.0%
Fringe Benefits to Gross Margin	8.5%	6.2 - 10.4%
Payroll & Fringes to Gross Margin	56.0%	51.5 - 61.4%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.18X	2.95 - 4.82X
% of Whse Sales from Non-Stock Items	25.0%	7.7 - 35.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.34X	2.34 - 3.86X
No. of Days Average Inventory Carried	87 Days	70 - 122 Days
Total Cost of Goods Sold to Ave Inventory	4.87X	3.37 - 6.32X
Whse Gross Margin Return on Ave Inventory	159%	135 - 191%
Turn & Earn Profitability Index	111%	86 - 128%
Percent of Firms on LIFO	52.9%	
ACCOUNTS RECEIVABLE		
Average Collection Period	46 Days	39 - 56 Days
Gross Margin Return on Receivables	205%	165 - 249%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	67.2%	60.0 - 72.8%
31-60 Days Outstanding	19.8%	15.7 - 24.8%
61-90 Days Outstanding	6.8%	3.4 - 9.0%
Over 90 Days Outstanding	6.2%	3.5 - 9.0%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,777	$1,009 - 2,054
31-60 Days Outstanding	$1,344	$925 - 1,823
61-90 Days Outstanding	$1,174	$637 - 1,725
Over 90 Days Outstanding	$1,211	$601 - 1,881
Total	$1,531	$1,134 - 1,951
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	63.9%	48.8 - 74.3%
31-60 Days Outstanding	20.1%	14.8 - 24.3%
61-90 Days Outstanding	8.7%	5.3 - 10.1%
Over 90 Days Outstanding	7.3%	4.3 - 7.1%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	71.9%	70.1 - 76.3%
Gross Margin	28.1%	23.5 - 29.4%
Operating Expenses:		
Selling Expenses	7.0%	5.3 - 9.4%
Delivery Expenses	1.8%	0.8 - 2.3%
Warehouse Expenses	2.6%	1.1 - 3.6%
General & Administrative Expenses	9.7%	5.8 - 9.9%
Occupancy Expenses	1.8%	0.8 - 2.2%
Other Operating Expenses	0.9%	0.0 - 0.2%
Total Operating Expenses	23.8%	18.9 - 24.8%
Net Operating Profit	4.4%	3.0 - 5.5%
Non-Operating Income	1.1%	0.2 - 1.5%
Non-Operating Expenses	1.5%	0.9 - 2.2%
Net Profit Before Tax	4.0%	2.0 - 5.2%
Net Profit After Tax	2.8%	1.8 - 3.7%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	23.8%	18.9 - 24.8%
Total Operating Expense to Gross Margin	84.1%	79.2 - 88.9%
Non-People Expense to Net Sales	7.7%	6.1 - 7.6%
Non-People Expense to Gross Margin	27.3%	21.5 - 30.3%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.4 - 1.2%
Times Interest Earned	6.0X	4.2 - 11.3X
BALANCE SHEET		
Cash	5.5%	0.1 - 8.3%
Accounts & Notes Receivable, Trade(Net)	35.7%	28.6 - 40.3%
Inventory	44.4%	37.0 - 52.7%
Other Current Assets	1.3%	0.2 - 1.5%
Total Current Assets	86.9%	84.7 - 91.9%
All Other Assets	13.1%	8.1 - 15.1%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	40.7%	25.0 - 52.3%
Total Long-Term Liabilities	11.6%	2.3 - 17.4%
Total Liabilities	52.4%	35.8 - 68.0%
Total Net Worth	47.6%	31.9 - 62.6%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES UNDER $5,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	12.6%	6.4 - 27.7%
Total Assets to Net Worth	1.7X	1.3 - 2.6X
Net Profit After Tax to Total Assets	6.9%	4.4 - 11.5%
Net Sales to Total Assets	3.0X	2.1 - 3.4X
Net Profit After Tax to Net Sales	1.8%	1.5 - 4.7%
Net Profit Before Tax to Net Worth	16.7%	7.7 - 32.2%
Net Profit Before Tax to Total Assets	8.7%	4.4 - 13.3%
EBIT to Total Assets	11.8%	11.2 - 13.1%
SALES ANALYSIS		
Net Sales($000)	$4,036	$2,955 - 4,121
Percent Sales Change from Prior Year	10.8%	4.5 - 19.5%
Sales Mix:		
Direct Sales	15.4%	5.0 - 13.4%
Warehouse Sales - Counter and Delivery	84.6%	75.0 - 95.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	5.4%	0.0 - 5.0%
Heating & Cooling Supplies & Equipment	0.3%	0.0 - 0.0%
Industrial P-V-F (Pipes-Valves-Fittings)	84.5%	65.0 - 100.0%
Other Industrial Supplies & Equipment	3.3%	0.0 - 0.0%
Other Products	6.4%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	31.2%	24.5 - 30.3%
Gross Margin on Direct Shipments	19.4%	12.0 - 22.8%
Gross Margin on Warehouse Sales	29.2%	27.9 - 29.8%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.31X	3.07 - 3.92X
Total Debt to Net Worth	71.7%	28.9 - 160.7%
Current Debt to Net Worth	57.8%	28.9 - 94.3%
Current Assets to Current Debt	2.72X	1.69 - 3.36X
Current Assets Minus Inventory/Curr Debt	1.14X	0.87 - 1.51X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	4.6 - 5.0
Average Invoice Size	$277	$245 - 300
Average Billing Line	$62.54	$37.88 - 75.05

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES UNDER $5,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$204,671	$155,329 - 227,074
Gross Margin Per Employee	$61,991	$44,164 - 63,729
Average Compensation Per Employee	$27,008	$22,599 - 28,642
Average Fringe Benefits Per Employee	$4,799	$4,039 - 5,083
Compensation & Fringes Per Employee	$31,886	$26,976 - 37,279
Payroll to Net Sales	15.3%	12.6 - 15.9%
Fringe Benefits to Net Sales	2.6%	1.9 - 3.1%
Payroll & Fringes to Net Sales	18.2%	14.9 - 18.6%
Payroll to Gross Margin	50.8%	42.4 - 54.4%
Fringe Benefits to Gross Margin	9.8%	5.5 - 10.4%
Payroll & Fringes to Gross Margin	61.4%	52.2 - 64.7%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.33X	2.90 - 4.75X
% of Whse Sales from Non-Stock Items	18.0%	7.7 - 30.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.74X	2.50 - 4.51X
No. of Days Average Inventory Carried	87 Days	63 - 124 Days
Total Cost of Goods Sold to Ave Inventory	4.92X	3.15 - 6.47X
Whse Gross Margin Return on Ave Inventory	166%	122 - 198%
Turn & Earn Profitability Index	98%	65 - 125%
Percent of Firms on LIFO	54.6%	
ACCOUNTS RECEIVABLE		
Average Collection Period	44 Days	39 - 46 Days
Gross Margin Return on Receivables	220%	200 - 266%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	66.3%	54.8 - 72.8%
31-60 Days Outstanding	22.8%	15.1 - 28.0%
61-90 Days Outstanding	6.5%	3.3 - 8.2%
Over 90 Days Outstanding	4.5%	0.9 - 6.6%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,009	$937 - 1,251
31-60 Days Outstanding	$1,272	$850 - 1,823
61-90 Days Outstanding	$1,189	$720 - 1,725
Over 90 Days Outstanding	$1,019	$218 - 1,289
Total	$1,134	$884 - 1,330
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	67.6%	57.1 - 75.2%
31-60 Days Outstanding	18.4%	16.0 - 24.3%
61-90 Days Outstanding	7.3%	5.3 - 9.8%
Over 90 Days Outstanding	6.6%	4.3 - 8.5%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES UNDER $5,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	68.8%	68.2 - 72.7%
Gross Margin	31.2%	24.5 - 30.3%
Operating Expenses:		
Selling Expenses	7.0%	5.6 - 9.6%
Delivery Expenses	1.6%	0.0 - 2.3%
Warehouse Expenses	2.9%	1.0 - 4.5%
General & Administrative Expenses	13.3%	8.2 - 12.2%
Occupancy Expenses	2.4%	0.9 - 2.5%
Other Operating Expenses	0.2%	0.0 - 0.0%
Total Operating Expenses	27.4%	21.7 - 29.4%
Net Operating Profit	3.8%	1.3 - 4.8%
Non-Operating Income	1.2%	0.3 - 1.7%
Non-Operating Expenses	1.4%	0.7 - 2.2%
Net Profit Before Tax	3.6%	1.7 - 4.9%
Net Profit After Tax	1.8%	1.5 - 4.7%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	27.4%	21.7 - 29.4%
Total Operating Expense to Gross Margin	88.0%	81.1 - 89.7%
Non-People Expense to Net Sales	9.2%	6.6 - 8.7%
Non-People Expense to Gross Margin	28.3%	21.5 - 31.3%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.7%	0.4 - 1.7%
Times Interest Earned	4.8X	1.9 - 6.2X
BALANCE SHEET		
Cash	9.2%	0.3 - 13.8%
Accounts & Notes Receivable, Trade(Net)	34.1%	24.5 - 36.1%
Inventory	40.2%	28.9 - 44.5%
Other Current Assets	1.7%	0.0 - 2.3%
Total Current Assets	85.1%	80.1 - 91.8%
All Other Assets	14.9%	8.1 - 15.3%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	39.3%	22.4 - 52.7%
Total Long-Term Liabilities	11.4%	0.5 - 10.2%
Total Liabilities	50.7%	22.4 - 62.7%
Total Net Worth	49.3%	26.8 - 67.8%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES $5,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	19.9%	14.5 - 29.0%
Total Assets to Net Worth	2.3X	2.0 - 3.3X
Net Profit After Tax to Total Assets	7.0%	6.6 - 9.6%
Net Sales to Total Assets	3.1X	2.5 - 3.7X
Net Profit After Tax to Net Sales	2.2%	1.9 - 2.9%
Net Profit Before Tax to Net Worth	26.9%	16.2 - 33.8%
Net Profit Before Tax to Total Assets	10.2%	7.9 - 13.0%
EBIT to Total Assets	14.0%	9.1 - 15.7%
SALES ANALYSIS		
Net Sales($000)	$7,597	$7,057 - 8,715
Percent Sales Change from Prior Year	17.1%	10.5 - 21.5%
Sales Mix:		
Direct Sales	10.6%	8.0 - 12.4%
Warehouse Sales - Counter and Delivery	89.4%	87.6 - 92.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	10.9%	0.0 - 15.0%
Heating & Cooling Supplies & Equipment	0.6%	0.0 - 0.0%
Industrial P-V-F (Pipes-Valves-Fittings)	81.4%	72.0 - 95.0%
Other Industrial Supplies & Equipment	3.5%	0.0 - 5.0%
Other Products	3.6%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.0%	22.4 - 27.7%
Gross Margin on Direct Shipments	13.0%	11.7 - 19.5%
Gross Margin on Warehouse Sales	26.4%	24.6 - 27.7%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.53X	3.19 - 4.00X
Total Debt to Net Worth	128.9%	96.8 - 232.0%
Current Debt to Net Worth	107.1%	54.4 - 184.5%
Current Assets to Current Debt	1.83X	1.58 - 2.67X
Current Assets Minus Inventory/Curr Debt	0.94X	0.79 - 1.36X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	3.2 - 8.0
Average Invoice Size	$293	$216 - 400
Average Billing Line	$61.26	$27.67 - 88.36

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES $5,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$260,651	$220,204 - 291,766
Gross Margin Per Employee	$68,325	$64,702 - 69,535
Average Compensation Per Employee	$31,710	$26,769 - 32,842
Average Fringe Benefits Per Employee	$5,158	$4,450 - 6,135
Compensation & Fringes Per Employee	$38,000	$31,577 - 42,123
Payroll to Net Sales	12.2%	11.1 - 12.7%
Fringe Benefits to Net Sales	2.1%	1.4 - 2.6%
Payroll & Fringes to Net Sales	14.4%	12.8 - 15.7%
Payroll to Gross Margin	46.1%	43.3 - 52.5%
Fringe Benefits to Gross Margin	8.3%	6.2 - 10.6%
Payroll & Fringes to Gross Margin	56.5%	51.8 - 61.8%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	5.20X	4.16 - 5.57X
% of Whse Sales from Non-Stock Items	30.0%	17.0 - 40.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.38X	2.93 - 3.80X
No. of Days Average Inventory Carried	70 Days	66 - 88 Days
Total Cost of Goods Sold to Ave Inventory	5.86X	4.80 - 6.63X
Whse Gross Margin Return on Ave Inventory	159%	142 - 191%
Turn & Earn Profitability Index	115%	109 - 140%
Percent of Firms on LIFO	36.4%	
ACCOUNTS RECEIVABLE		
Average Collection Period	46 Days	41 - 56 Days
Gross Margin Return on Receivables	199%	149 - 223%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	68.3%	60.0 - 72.7%
31-60 Days Outstanding	19.4%	17.5 - 23.9%
61-90 Days Outstanding	6.3%	3.2 - 5.8%
Over 90 Days Outstanding	6.0%	3.5 - 6.5%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,850	$1,647 - 2,054
31-60 Days Outstanding	$1,344	$932 - 1,812
61-90 Days Outstanding	$1,135	$637 - 1,380
Over 90 Days Outstanding	$1,211	$601 - 1,897
Total	$1,836	$1,531 - 1,951
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	57.0%	39.1 - 72.9%
31-60 Days Outstanding	23.9%	14.3 - 27.8%
61-90 Days Outstanding	10.4%	5.5 - 10.9%
Over 90 Days Outstanding	8.7%	5.1 - 7.1%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES $5,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.0%	72.2 - 75.5%
Gross Margin	26.0%	22.4 - 27.7%
Operating Expenses:		
Selling Expenses	6.8%	5.1 - 9.3%
Delivery Expenses	2.0%	1.0 - 2.0%
Warehouse Expenses	1.9%	1.1 - 2.9%
General & Administrative Expenses	7.4%	4.2 - 9.4%
Occupancy Expenses	1.4%	0.8 - 1.5%
Other Operating Expenses	2.7%	0.0 - 0.1%
Total Operating Expenses	22.1%	18.5 - 23.7%
Net Operating Profit	3.9%	3.0 - 4.5%
Non-Operating Income	1.1%	0.1 - 1.3%
Non-Operating Expenses	1.7%	1.0 - 1.9%
Net Profit Before Tax	3.2%	2.1 - 3.6%
Net Profit After Tax	2.2%	1.9 - 2.9%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.1%	18.5 - 23.7%
Total Operating Expense to Gross Margin	84.4%	82.3 - 89.4%
Non-People Expense to Net Sales	6.9%	5.7 - 7.6%
Non-People Expense to Gross Margin	27.4%	23.3 - 29.0%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.5 - 1.2%
Times Interest Earned	4.3X	2.7 - 8.6X
BALANCE SHEET		
Cash	3.4%	0.0 - 4.0%
Accounts & Notes Receivable, Trade(Net)	39.5%	34.0 - 42.5%
Inventory	43.8%	38.2 - 48.1%
Other Current Assets	1.1%	0.3 - 1.5%
Total Current Assets	87.8%	86.2 - 91.9%
All Other Assets	12.2%	8.1 - 13.9%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	43.2%	32.2 - 52.4%
Total Long-Term Liabilities	15.8%	8.6 - 20.2%
Total Liabilities	59.0%	49.2 - 69.9%
Total Net Worth	41.0%	30.1 - 50.8%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	16.8%	13.0 - 24.4%
Total Assets to Net Worth	1.9X	1.5 - 2.1X
Net Profit After Tax to Total Assets	9.3%	7.0 - 11.3%
Net Sales to Total Assets	2.7X	2.3 - 2.8X
Net Profit After Tax to Net Sales	3.5%	2.5 - 3.8%
Net Profit Before Tax to Net Worth	24.3%	19.8 - 30.6%
Net Profit Before Tax to Total Assets	13.0%	9.8 - 18.2%
EBIT to Total Assets	14.3%	12.6 - 20.3%
SALES ANALYSIS		
Net Sales($000)	$24,749	$16,351 - 30,534
Percent Sales Change from Prior Year	23.8%	16.6 - 29.0%
Sales Mix:		
Direct Sales	14.4%	4.4 - 23.0%
Warehouse Sales - Counter and Delivery	85.6%	74.8 - 95.1%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	7.5%	0.0 - 5.0%
Heating & Cooling Supplies & Equipment	3.0%	0.0 - 0.0%
Industrial P-V-F (Pipes-Valves-Fittings)	82.2%	70.0 - 100.0%
Other Industrial Supplies & Equipment	3.8%	0.0 - 0.0%
Other Products	3.5%	0.0 - 3.4%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.5%	23.0 - 27.8%
Gross Margin on Direct Shipments	13.2%	12.3 - 17.6%
Gross Margin on Warehouse Sales	27.8%	23.5 - 32.7%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.01X	2.64 - 3.20X
Total Debt to Net Worth	86.4%	48.8 - 114.4%
Current Debt to Net Worth	77.1%	43.4 - 99.9%
Current Assets to Current Debt	2.21X	1.80 - 2.95X
Current Assets Minus Inventory/Curr Debt	0.96X	0.69 - 1.30X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	3.9	3.3 - 5.0
Average Invoice Size	$346	$249 - 560
Average Billing Line	$80.88	$57.65 - 143.16

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$264,633	$215,150 - 300,525
Gross Margin Per Employee	$69,863	$59,442 - 72,013
Average Compensation Per Employee	$29,580	$28,295 - 32,045
Average Fringe Benefits Per Employee	$4,902	$4,211 - 5,997
Compensation & Fringes Per Employee	$34,692	$32,751 - 39,758
Payroll to Net Sales	11.7%	10.2 - 13.7%
Fringe Benefits to Net Sales	2.0%	1.5 - 2.5%
Payroll & Fringes to Net Sales	13.9%	11.8 - 16.8%
Payroll to Gross Margin	44.7%	42.5 - 48.4%
Fringe Benefits to Gross Margin	8.5%	6.6 - 9.0%
Payroll & Fringes to Gross Margin	53.9%	50.4 - 56.1%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.90X	2.77 - 4.56X
% of Whse Sales from Non-Stock Items	15.3%	5.0 - 25.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.01X	1.95 - 3.43X
No. of Days Average Inventory Carried	91 Days	80 - 112 Days
Total Cost of Goods Sold to Ave Inventory	4.68X	3.94 - 5.02X
Whse Gross Margin Return on Ave Inventory	139%	116 - 179%
Turn & Earn Profitability Index	107%	80 - 113%
Percent of Firms on LIFO	66.7%	
ACCOUNTS RECEIVABLE		
Average Collection Period	47 Days	38 - 56 Days
Gross Margin Return on Receivables	199%	152 - 215%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	67.1%	61.3 - 71.0%
31-60 Days Outstanding	17.5%	17.7 - 21.2%
61-90 Days Outstanding	7.5%	4.0 - 11.0%
Over 90 Days Outstanding	7.9%	5.9 - 9.2%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	INSUFFICIENT DATA	
31-60 Days Outstanding	INSUFFICIENT DATA	
61-90 Days Outstanding	INSUFFICIENT DATA	
Over 90 Days Outstanding	INSUFFICIENT DATA	
Total	INSUFFICIENT DATA	
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	INSUFFICIENT DATA	
31-60 Days Outstanding	INSUFFICIENT DATA	
61-90 Days Outstanding	INSUFFICIENT DATA	
Over 90 Days Outstanding	INSUFFICIENT DATA	
Total	INSUFFICIENT DATA	

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

INDUSTRIAL P-V-F FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	73.5%	72.2 - 77.0%
Gross Margin	26.5%	23.0 - 27.8%
Operating Expenses:		
Selling Expenses	7.3%	5.7 - 9.4%
Delivery Expenses	1.7%	0.8 - 2.0%
Warehouse Expenses	3.0%	1.8 - 3.4%
General & Administrative Expenses	7.7%	5.8 - 9.1%
Occupancy Expenses	1.3%	0.5 - 1.6%
Other Operating Expenses	0.2%	0.0 - 0.2%
Total Operating Expenses	21.1%	17.9 - 21.7%
Net Operating Profit	5.5%	4.9 - 6.4%
Non-Operating Income	0.9%	0.3 - 1.3%
Non-Operating Expenses	1.4%	0.8 - 2.1%
Net Profit Before Tax	5.0%	3.5 - 6.5%
Net Profit After Tax	3.5%	2.5 - 3.8%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	21.1%	17.9 - 21.7%
Total Operating Expense to Gross Margin	79.4%	75.9 - 81.1%
Non-People Expense to Net Sales	7.0%	5.5 - 6.7%
Non-People Expense to Gross Margin	26.3%	20.5 - 29.6%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.6%	0.3 - 1.0%
Times Interest Earned	7.1X	5.3 - 11.3X
BALANCE SHEET		
Cash	3.6%	0.1 - 3.0%
Accounts & Notes Receivable, Trade(Net)	33.9%	28.6 - 37.8%
Inventory	49.4%	44.9 - 52.9%
Other Current Assets	1.1%	0.5 - 1.4%
Total Current Assets	88.0%	85.7 - 91.9%
All Other Assets	12.1%	7.1 - 11.4%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	40.0%	29.0 - 44.1%
Total Long-Term Liabilities	8.0%	1.9 - 11.8%
Total Liabilities	48.0%	32.8 - 53.4%
Total Net Worth	52.0%	40.0 - 62.6%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HIGH PROFIT INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	19.9%	14.8 - 32.5%
Total Assets to Net Worth	2.1X	1.5 - 2.5X
Net Profit After Tax to Total Assets	11.5%	9.3 - 13.0%
Net Sales to Total Assets	3.1X	2.4 - 3.7X
Net Profit After Tax to Net Sales	3.7%	3.1 - 5.3%
Net Profit Before Tax to Net Worth	32.2%	23.4 - 42.9%
Net Profit Before Tax to Total Assets	15.6%	13.0 - 18.5%
EBIT to Total Assets	16.5%	14.3 - 20.3%
SALES ANALYSIS		
Net Sales($000)	$10,165	$4,996 - 17,372
Percent Sales Change from Prior Year	18.8%	11.3 - 26.9%
Sales Mix:		
Direct Sales	12.8%	5.0 - 15.2%
Warehouse Sales - Counter and Delivery	87.2%	84.7 - 95.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	7.9%	0.0 - 10.0%
Heating & Cooling Supplies & Equipment	2.1%	0.0 - 0.0%
Industrial P-V-F (Pipes-Valves-Fittings)	81.7%	60.0 - 100.0%
Other Industrial Supplies & Equipment	3.4%	0.0 - 4.5%
Other Products	5.0%	0.0 - 3.4%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	30.2%	24.8 - 29.9%
Gross Margin on Direct Shipments	13.2%	12.0 - 21.5%
Gross Margin on Warehouse Sales	27.9%	24.4 - 32.7%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.38X	2.79 - 3.88X
Total Debt to Net Worth	110.4%	48.8 - 150.0%
Current Debt to Net Worth	92.8%	34.2 - 127.3%
Current Assets to Current Debt	2.45X	1.83 - 3.58X
Current Assets Minus Inventory/Curr Debt	1.30X	0.96 - 1.73X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.0	3.3 - 6.0
Average Invoice Size	$302	$264 - 435
Average Billing Line	$75.05	$54.16 - 90.96

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HIGH PROFIT INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$252,032	$204,671 - 286,538
Gross Margin Per Employee	$69,863	$61,991 - 72,013
Average Compensation Per Employee	$30,276	$27,008 - 32,045
Average Fringe Benefits Per Employee	$4,902	$3,804 - 6,737
Compensation & Fringes Per Employee	$37,279	$31,886 - 39,503
Payroll to Net Sales	12.2%	10.8 - 13.8%
Fringe Benefits to Net Sales	2.1%	1.5 - 3.3%
Payroll & Fringes to Net Sales	14.9%	12.8 - 16.8%
Payroll to Gross Margin	44.8%	42.5 - 48.4%
Fringe Benefits to Gross Margin	7.9%	6.2 - 9.7%
Payroll & Fringes to Gross Margin	53.9%	50.4 - 56.0%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.16X	2.95 - 5.20X
% of Whse Sales from Non-Stock Items	30.0%	15.3 - 35.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.34X	2.11 - 3.74X
No. of Days Average Inventory Carried	80 Days	66 - 112 Days
Total Cost of Goods Sold to Ave Inventory	5.13X	3.80 - 6.36X
Whse Gross Margin Return on Ave Inventory	159%	135 - 195%
Turn & Earn Profitability Index	111%	89 - 130%
Percent of Firms on LIFO	42.1%	
ACCOUNTS RECEIVABLE		
Average Collection Period	46 Days	39 - 49 Days
Gross Margin Return on Receivables	218%	187 - 249%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	68.0%	60.0 - 74.1%
31-60 Days Outstanding	19.2%	15.1 - 24.8%
61-90 Days Outstanding	6.6%	3.2 - 9.0%
Over 90 Days Outstanding	6.2%	2.0 - 9.2%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,850	$1,037 - 2,541
31-60 Days Outstanding	$950	$925 - 1,645
61-90 Days Outstanding	$1,135	$479 - 1,638
Over 90 Days Outstanding	$1,010	$517 - 1,226
Total	$1,531	$1,133 - 2,096
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	63.4%	43.5 - 71.5%
31-60 Days Outstanding	18.3%	7.4 - 21.0%
61-90 Days Outstanding	9.5%	5.5 - 10.9%
Over 90 Days Outstanding	8.8%	5.1 - 10.0%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HIGH PROFIT INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	69.8%	69.7 - 75.1%
Gross Margin	30.2%	24.8 - 29.9%
Operating Expenses:		
Selling Expenses	7.6%	5.9 - 9.6%
Delivery Expenses	1.9%	0.9 - 2.3%
Warehouse Expenses	3.1%	1.2 - 3.6%
General & Administrative Expenses	9.9%	6.4 - 9.5%
Occupancy Expenses	1.9%	0.9 - 1.7%
Other Operating Expenses	0.0%	0.0 - 0.0%
Total Operating Expenses	24.4%	19.7 - 24.2%
Net Operating Profit	5.8%	4.5 - 6.7%
Non-Operating Income	1.1%	0.2 - 1.5%
Non-Operating Expenses	1.2%	0.9 - 1.5%
Net Profit Before Tax	5.7%	4.7 - 6.6%
Net Profit After Tax	3.7%	3.1 - 5.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	24.4%	19.7 - 24.2%
Total Operating Expense to Gross Margin	80.0%	75.9 - 84.0%
Non-People Expense to Net Sales	8.1%	5.5 - 7.6%
Non-People Expense to Gross Margin	26.0%	21.4 - 29.0%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.6%	0.3 - 0.9%
Times Interest Earned	9.5X	6.2 - 13.5X
BALANCE SHEET		
Cash	8.1%	1.0 - 13.7%
Accounts & Notes Receivable, Trade(Net)	37.6%	30.2 - 41.2%
Inventory	42.3%	38.0 - 48.1%
Other Current Assets	1.7%	0.5 - 2.0%
Total Current Assets	89.6%	87.3 - 91.9%
All Other Assets	10.4%	8.1 - 12.7%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	38.5%	22.0 - 52.4%
Total Long-Term Liabilities	8.6%	2.7 - 13.8%
Total Liabilities	47.1%	32.8 - 60.0%
Total Net Worth	52.9%	40.0 - 67.2%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

PLUMBING SUPPLIES & EQUIPMENT AND INDUSTRIAL P-V-F FIRMS

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	8.1%	5.2 - 15.8%
Total Assets to Net Worth	1.8X	1.5 - 2.6X
Net Profit After Tax to Total Assets	5.0%	2.8 - 8.6%
Net Sales to Total Assets	2.7X	2.3 - 3.0X
Net Profit After Tax to Net Sales	1.7%	1.2 - 3.1%
Net Profit Before Tax to Net Worth	12.9%	7.0 - 25.7%
Net Profit Before Tax to Total Assets	6.1%	3.6 - 9.5%
EBIT to Total Assets	8.9%	5.9 - 12.5%
SALES ANALYSIS		
Net Sales($000)	$7,509	$5,100 - 16,814
Percent Sales Change from Prior Year	10.2%	6.0 - 17.8%
Sales Mix:		
Direct Sales	8.8%	1.0 - 13.7%
Warehouse Sales - Counter and Delivery	91.2%	86.1 - 97.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	40.3%	35.0 - 45.0%
Heating & Cooling Supplies & Equipment	23.3%	20.0 - 30.0%
Industrial P-V-F (Pipes-Valves-Fittings)	24.7%	15.0 - 31.4%
Other Industrial Supplies & Equipment	6.2%	0.0 - 10.0%
Other Products	5.5%	0.0 - 6.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.6%	22.8 - 27.3%
Gross Margin on Direct Shipments	11.0%	9.6 - 15.0%
Gross Margin on Warehouse Sales	25.9%	24.0 - 27.7%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.11X	2.73 - 3.52X
Total Debt to Net Worth	81.4%	45.1 - 161.3%
Current Debt to Net Worth	48.1%	32.5 - 114.5%
Current Assets to Current Debt	2.48X	1.68 - 3.57X
Current Assets Minus Inventory/Curr Debt	1.00X	0.77 - 1.61X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.5	4.3 - 7.0
Average Invoice Size	$190	$118 - 232
Average Billing Line	$29.78	$24.90 - 38.63

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$202,519	$170,821 - 231,458
Gross Margin Per Employee	$53,925	$42,553 - 60,097
Average Compensation Per Employee	$24,701	$22,041 - 26,984
Average Fringe Benefits Per Employee	$4,992	$3,863 - 6,195
Compensation & Fringes Per Employee	$30,009	$26,425 - 32,503
Payroll to Net Sales	12.7%	10.3 - 14.2%
Fringe Benefits to Net Sales	2.5%	1.9 - 2.9%
Payroll & Fringes to Net Sales	15.2%	12.7 - 16.8%
Payroll to Gross Margin	47.7%	43.5 - 56.1%
Fringe Benefits to Gross Margin	9.2%	7.7 - 11.5%
Payroll & Fringes to Gross Margin	58.5%	52.8 - 64.6%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.07X	3.10 - 4.69X
% of Whse Sales from Non-Stock Items	15.0%	10.0 - 24.3%
Cost of In-Stock Whse Sales/Ave Inventory	3.11X	2.54 - 3.75X
No. of Days Average Inventory Carried	90 Days	74 - 114 Days
Total Cost of Goods Sold to Ave Inventory	4.58X	3.41 - 5.40X
Whse Gross Margin Return on Ave Inventory	137%	112 - 191%
Turn & Earn Profitability Index	101%	83 - 132%
Percent of Firms on LIFO	45.2%	
ACCOUNTS RECEIVABLE		
Average Collection Period	50 Days	47 - 57 Days
Gross Margin Return on Receivables	179%	146 - 207%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	61.6%	52.0 - 72.2%
31-60 Days Outstanding	19.7%	15.0 - 20.8%
61-90 Days Outstanding	8.3%	5.1 - 10.1%
Over 90 Days Outstanding	10.5%	5.0 - 12.5%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,276	$755 - 2,013
31-60 Days Outstanding	$1,424	$965 - 2,341
61-90 Days Outstanding	$1,284	$807 - 1,921
Over 90 Days Outstanding	$1,511	$975 - 2,674
Total	$1,423	$1,086 - 2,006
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	62.4%	55.9 - 73.7%
31-60 Days Outstanding	19.3%	14.6 - 22.0%
61-90 Days Outstanding	8.8%	6.1 - 9.9%
Over 90 Days Outstanding	9.6%	4.0 - 15.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & EQUIPMENT & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.4%	72.7 - 77.2%
Gross Margin	25.6%	22.8 - 27.3%
Operating Expenses:		
Selling Expenses	6.4%	4.9 - 8.1%
Delivery Expenses	1.7%	1.0 - 2.1%
Warehouse Expenses	2.3%	1.7 - 3.0%
General & Administrative Expenses	9.8%	7.4 - 11.2%
Occupancy Expenses	1.7%	0.9 - 2.1%
Other Operating Expenses	0.3%	0.0 - 0.0%
Total Operating Expenses	22.8%	19.2 - 24.9%
Net Operating Profit	2.8%	0.9 - 3.7%
Non-Operating Income	1.9%	1.4 - 2.4%
Non-Operating Expenses	1.7%	0.9 - 1.9%
Net Profit Before Tax	3.0%	1.3 - 3.7%
Net Profit After Tax	1.7%	1.2 - 3.1%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.8%	19.2 - 24.9%
Total Operating Expense to Gross Margin	89.5%	83.6 - 95.2%
Non-People Expense to Net Sales	7.5%	7.0 - 8.6%
Non-People Expense to Gross Margin	30.3%	28.9 - 34.0%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.7%	0.4 - 1.5%
Times Interest Earned	3.8X	1.9 - 9.6X
BALANCE SHEET		
Cash	4.1%	0.3 - 3.7%
Accounts & Notes Receivable, Trade(Net)	33.8%	28.6 - 40.3%
Inventory	45.3%	35.5 - 51.5%
Other Current Assets	1.6%	0.2 - 2.0%
Total Current Assets	84.7%	80.3 - 90.5%
All Other Assets	15.3%	9.4 - 19.6%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	36.5%	23.4 - 46.6%
Total Long-Term Liabilities	13.3%	0.9 - 18.3%
Total Liabilities	49.9%	31.2 - 64.9%
Total Net Worth	50.1%	34.7 - 68.6%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES UNDER $5,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	13.4%	11.9 - 16.7%
Total Assets to Net Worth	2.4X	1.2 - 3.4X
Net Profit After Tax to Total Assets	5.1%	4.2 - 8.7%
Net Sales to Total Assets	2.2X	2.1 - 2.6X
Net Profit After Tax to Net Sales	1.9%	1.4 - 4.0%
Net Profit Before Tax to Net Worth	15.4%	11.9 - 27.4%
Net Profit Before Tax to Total Assets	6.6%	4.9 - 9.9%
EBIT to Total Assets	10.3%	
SALES ANALYSIS		
Net Sales($000)	$3,231	$3,037 - 3,443
Percent Sales Change from Prior Year	14.1%	4.6 - 23.9%
Sales Mix.		
Direct Sales	INSUFFICIENT DATA	
Warehouse Sales - Counter and Delivery	INSUFFICIENT DATA	
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	41.7%	40.0 - 50.0%
Heating & Cooling Supplies & Equipment	19.7%	15.0 - 25.0%
Industrial P-V-F (Pipes-Valves-Fittings)	24.6%	10.0 - 35.0%
Other Industrial Supplies & Equipment	5.8%	0.0 - 10.0%
Other Products	8.3%	0.0 - 5.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	28.0%	23.0 - 27.6%
Gross Margin on Direct Shipments	INSUFFICIENT DATA	
Gross Margin on Warehouse Sales	INSUFFICIENT DATA	
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.70X	2.37 - 2.91X
Total Debt to Net Worth	139.0%	16.6 - 236.6%
Current Debt to Net Worth	46.8%	16.6 - 199.2%
Current Assets to Current Debt	4.42X	1.87 - 6.55X
Current Assets Minus Inventory/Curr Debt	1.36X	0.95 - 2.38X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	4.4 - 5.5
Average Invoice Size	$149	$106 - 207
Average Billing Line	$29.54	$24.90 - 32.80

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES UNDER $5,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$174,060	$153,870 - 202,519
Gross Margin Per Employee	$51,170	$37,346 - 67,964
Average Compensation Per Employee	$24,418	$18,762 - 26,207
Average Fringe Benefits Per Employee	$3,985	$2,335 - 6,397
Compensation & Fringes Per Employee	$28,686	$21,097 - 30,842
Payroll to Net Sales	13.3%	10.8 - 14.5%
Fringe Benefits to Net Sales	2.3%	1.3 - 3.0%
Payroll & Fringes to Net Sales	16.0%	12.1 - 17.2%
Payroll to Gross Margin	47.7%	43.9 - 50.2%
Fringe Benefits to Gross Margin	7.1%	5.7 - 9.7%
Payroll & Fringes to Gross Margin	56.5%	51.0 - 60.3%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	INSUFFICIENT DATA	
% of Whse Sales from Non-Stock Items	10.0%	5.0 - 20.0%
Cost of In-Stock Whse Sales/Ave Inventory	INSUFFICIENT DATA	
No. of Days Average Inventory Carried	INSUFFICIENT DATA	
Total Cost of Goods Sold to Ave Inventory	2.59X	1.52 - 5.16X
Whse Gross Margin Return on Ave Inventory	INSUFFICIENT DATA	
Turn & Earn Profitability Index	INSUFFICIENT DATA	
Percent of Firms on LIFO	42.9%	
ACCOUNTS RECEIVABLE		
Average Collection Period	48 Days	46 - 56 Days
Gross Margin Return on Receivables	213%	130 - 222%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	68.1%	59.3 - 77.9%
31-60 Days Outstanding	13.9%	8.3 - 15.2%
61-90 Days Outstanding	6.8%	2.4 - 9.0%
Over 90 Days Outstanding	11.3%	5.4 - 12.4%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	INSUFFICIENT DATA	
31-60 Days Outstanding	INSUFFICIENT DATA	
61-90 Days Outstanding	INSUFFICIENT DATA	
Over 90 Days Outstanding	INSUFFICIENT DATA	
Total	INSUFFICIENT DATA	
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	INSUFFICIENT DATA	
31-60 Days Outstanding	INSUFFICIENT DATA	
61-90 Days Outstanding	INSUFFICIENT DATA	
Over 90 Days Outstanding	INSUFFICIENT DATA	
Total	INSUFFICIENT DATA	

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES UNDER $5,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	72.0%	67.1 - 77.0%
Gross Margin	28.0%	23.0 - 27.6%
Operating Expenses:		
Selling Expenses	5.2%	2.6 - 7.1%
Delivery Expenses	1.3%	0.0 - 1.4%
Warehouse Expenses	2.6%	1.4 - 2.8%
General & Administrative Expenses	13.2%	9.3 - 12.4%
Occupancy Expenses	2.2%	0.0 - 4.1%
Other Operating Expenses	0.0%	0.0 - 0.0%
Total Operating Expenses	24.6%	19.1 - 25.4%
Net Operating Profit	3.5%	0.7 - 3.7%
Non-Operating Income	1.4%	0.9 - 1.6%
Non-Operating Expenses	1.4%	0.8 - 1.9%
Net Profit Before Tax	3.5%	1.6 - 3.1%
Net Profit After Tax	1.9%	1.4 - 4.0%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	24.6%	19.1 - 25.4%
Total Operating Expense to Gross Margin	88.5%	76.9 - 92.1%
Non-People Expense to Net Sales	7.2%	7.0 - 9.2%
Non-People Expense to Gross Margin	27.8%	28.7 - 33.6%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.8%	
Times Interest Earned	2.5X	
BALANCE SHEET		
Cash	8.4%	2.0 - 18.6%
Accounts & Notes Receivable, Trade(Net)	28.7%	20.3 - 35.1%
Inventory	46.0%	32.7 - 57.1%
Other Current Assets	1.9%	0.6 - 2.0%
Total Current Assets	85.0%	81.3 - 91.6%
All Other Assets	15.0%	8.4 - 18.7%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	30.5%	13.7 - 42.7%
Total Long-Term Liabilities	19.5%	2.4 - 33.9%
Total Liabilities	49.9%	14.3 - 70.3%
Total Net Worth	50.1%	29.7 - 85.7%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES $5,000,000 TO $9,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	7.0%	5.5 - 12.4%
Total Assets to Net Worth	1.6X	1.4 - 1.8X
Net Profit After Tax to Total Assets	5.6%	3.6 - 8.6%
Net Sales to Total Assets	3.0X	2.6 - 3.1X
Net Profit After Tax to Net Sales	1.7%	1.2 - 2.9%
Net Profit Before Tax to Net Worth	8.7%	7.0 - 19.6%
Net Profit Before Tax to Total Assets	6.1%	3.6 - 9.5%
EBIT to Total Assets	6.4%	4.8 - 11.1%
SALES ANALYSIS		
Net Sales($000)	$6,242	$5,775 - 7,509
Percent Sales Change from Prior Year	8.9%	6.0 - 13.5%
Sales Mix:		
Direct Sales	9.4%	1.0 - 14.7%
Warehouse Sales - Counter and Delivery	90.5%	85.3 - 99.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	41.5%	37.0 - 45.0%
Heating & Cooling Supplies & Equipment	23.5%	15.0 - 30.0%
Industrial P-V-F (Pipes-Valves-Fittings)	22.0%	15.0 - 25.0%
Other Industrial Supplies & Equipment	7.4%	0.0 - 11.0%
Other Products	5.5%	0.0 - 5.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.8%	22.8 - 29.5%
Gross Margin on Direct Shipments	11.0%	
Gross Margin on Warehouse Sales	25.8%	24.0 - 27.7%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.34X	2.85 - 3.59X
Total Debt to Net Worth	54.7%	36.4 - 81.3%
Current Debt to Net Worth	47.9%	35.9 - 80.1%
Current Assets to Current Debt	2.48X	1.78 - 3.50X
Current Assets Minus Inventory/Curr Debt	0.96X	0.68 - 1.72X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.5	5.0 - 8.0
Average Invoice Size	$170	$113 - 190
Average Billing Line	$25.65	$21.56 - 29.28

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES $5,000,000 TO $9,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$178,761	$160,834 - 185,210
Gross Margin Per Employee	$48,666	$42,553 - 50,518
Average Compensation Per Employee	$23,497	$22,785 - 26,044
Average Fringe Benefits Per Employee	$4,942	$3,863 - 5,101
Compensation & Fringes Per Employee	$28,830	$27,206 - 30,015
Payroll to Net Sales	12.9%	11.6 - 14.0%
Fringe Benefits to Net Sales	2.6%	2.1 - 2.8%
Payroll & Fringes to Net Sales	15.6%	13.9 - 16.1%
Payroll to Gross Margin	48.7%	43.5 - 56.1%
Fringe Benefits to Gross Margin	9.8%	8.0 - 11.4%
Payroll & Fringes to Gross Margin	60.7%	52.8 - 65.7%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.02X	2.86 - 4.35X
% of Whse Sales from Non-Stock Items	20.0%	11.0 - 25.0%
Cost of In-Stock Whse Sales/Ave Inventory	2.82X	2.39 - 3.22X
No. of Days Average Inventory Carried	85 Days	72 - 118 Days
Total Cost of Goods Sold to Ave Inventory	4.66X	3.41 - 5.09X
Whse Gross Margin Return on Ave Inventory	140%	129 - 191%
Turn & Earn Profitability Index	104%	91 - 132%
Percent of Firms on LIFO	27.3%	
ACCOUNTS RECEIVABLE		
Average Collection Period	50 Days	47 - 55 Days
Gross Margin Return on Receivables	189%	167 - 201%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	60.8%	51.0 - 65.6%
31-60 Days Outstanding	19.4%	17.7 - 20.8%
61-90 Days Outstanding	8.3%	5.9 - 9.0%
Over 90 Days Outstanding	11.6%	4.7 - 20.3%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,223	$755 - 1,276
31-60 Days Outstanding	$1,043	$965 - 1,424
61-90 Days Outstanding	$897	$807 - 1,294
Over 90 Days Outstanding	$1,511	$1,419 - 2,280
Total	$1,174	$737 - 1,423
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	63.6%	55.9 - 72.3%
31-60 Days Outstanding	17.3%	14.7 - 21.0%
61-90 Days Outstanding	8.9%	5.5 - 9.9%
Over 90 Days Outstanding	10.1%	3.0 - 6.8%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES $5,000,000 TO $9,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	73.2%	69.7 - 75.8%
Gross Margin	26.8%	22.8 - 29.5%
Operating Expenses:		
Selling Expenses	7.8%	5.6 - 9.4%
Delivery Expenses	1.7%	0.0 - 2.2%
Warehouse Expenses	2.9%	1.3 - 4.1%
General & Administrative Expenses	9.2%	7.4 - 11.4%
Occupancy Expenses	1.9%	1.4 - 2.2%
Other Operating Expenses	0.7%	0.0 - 0.6%
Total Operating Expenses	24.2%	22.1 - 25.0%
Net Operating Profit	2.6%	0.7 - 3.0%
Non-Operating Income	1.8%	1.1 - 2.4%
Non-Operating Expenses	1.9%	0.3 - 2.5%
Net Profit Before Tax	2.4%	0.6 - 3.3%
Net Profit After Tax	1.7%	1.2 - 2.9%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	24.2%	22.1 - 25.0%
Total Operating Expense to Gross Margin	90.6%	86.4 - 96.1%
Non-People Expense to Net Sales	8.1%	7.0 - 8.5%
Non-People Expense to Gross Margin	30.9%	27.8 - 32.0%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.5%	0.4 - 1.0%
Times Interest Earned	3.8X	1.5 - 6.9X
BALANCE SHEET		
Cash	3.4%	0.2 - 5.2%
Accounts & Notes Receivable, Trade(Net)	35.7%	31.4 - 43.0%
Inventory	45.9%	44.3 - 51.0%
Other Current Assets	2.1%	0.4 - 2.7%
Total Current Assets	87.2%	84.5 - 90.2%
All Other Assets	12.8%	9.8 - 15.6%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	39.6%	26.7 - 47.7%
Total Long-Term Liabilities	11.5%	0.7 - 11.9%
Total Liabilities	51.1%	31.4 - 57.2%
Total Net Worth	48.9%	42.8 - 68.6%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES OVER $9,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	9.0%	5.0 - 17.2%
Total Assets to Net Worth	1.9X	1.5 - 2.6X
Net Profit After Tax to Total Assets	4.1%	2.7 - 5.2%
Net Sales to Total Assets	2.7X	2.3 - 3.1X
Net Profit After Tax to Net Sales	1.5%	1.2 - 2.2%
Net Profit Before Tax to Net Worth	15.6%	7.3 - 26.9%
Net Profit Before Tax to Total Assets	6.3%	3.7 - 8.9%
EBIT to Total Assets	9.4%	5.9 - 12.6%
SALES ANALYSIS		
Net Sales($000)	$18,517	$12,835 - 25,578
Percent Sales Change from Prior Year	10.2%	4.6 - 18.2%
Sales Mix:		
Direct Sales	10.4%	5.0 - 13.7%
Warehouse Sales - Counter and Delivery	89.6%	86.1 - 92.6%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	38.7%	35.0 - 40.0%
Heating & Cooling Supplies & Equipment	25.2%	20.0 - 32.0%
Industrial P-V-F (Pipes-Valves-Fittings)	26.7%	20.0 - 31.4%
Other Industrial Supplies & Equipment	5.9%	0.0 - 10.0%
Other Products	3.5%	0.0 - 6.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	23.2%	21.8 - 24.0%
Gross Margin on Direct Shipments	12.2%	10.6 - 13.5%
Gross Margin on Warehouse Sales	25.0%	23.1 - 25.9%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.29X	2.84 - 3.52X
Total Debt to Net Worth	94.2%	52.3 - 161.3%
Current Debt to Net Worth	68.3%	44.3 - 131.1%
Current Assets to Current Debt	2.19X	1.61 - 2.91X
Current Assets Minus Inventory/Curr Debt	1.00X	0.75 - 1.24X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.4	4.2 - 6.0
Average Invoice Size	$201	$184 - 232
Average Billing Line	$38.63	$30.20 - 45.63

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES OVER $9,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$245,262	$222,345 - 250,955
Gross Margin Per Employee	$59,721	$53,925 - 60,594
Average Compensation Per Employee	$26,674	$23,359 - 27,330
Average Fringe Benefits Per Employee	$5,974	$4,924 - 6,406
Compensation & Fringes Per Employee	$32,503	$29,848 - 35,489
Payroll to Net Sales	10.3%	9.8 - 11.3%
Fringe Benefits to Net Sales	2.2%	1.9 - 2.8%
Payroll & Fringes to Net Sales	12.9%	11.9 - 14.1%
Payroll to Gross Margin	46.2%	42.2 - 50.0%
Fringe Benefits to Gross Margin	9.2%	7.7 - 11.9%
Payroll & Fringes to Gross Margin	55.5%	51.2 - 60.9%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.07X	3.26 - 4.58X
% of Whse Sales from Non-Stock Items	11.0%	10.0 - 20.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.11X	2.93 - 3.47X
No. of Days Average Inventory Carried	90 Days	78 - 99 Days
Total Cost of Goods Sold to Ave Inventory	4.58X	4.00 - 5.40X
Whse Gross Margin Return on Ave Inventory	129%	112 - 144%
Turn & Earn Profitability Index	96%	83 - 110%
Percent of Firms on LIFO	66.7%	
ACCOUNTS RECEIVABLE		
Average Collection Period	50 Days	48 - 57 Days
Gross Margin Return on Receivables	164%	142 - 175%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	57.8%	51.2 - 72.0%
31-60 Days Outstanding	24.0%	18.8 - 22.7%
61-90 Days Outstanding	9.3%	5.1 - 11.9%
Over 90 Days Outstanding	9.0%	3.5 - 10.7%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$2,013	$856 - 2,052
31-60 Days Outstanding	$2,453	$1,409 - 3,072
61-90 Days Outstanding	$2,000	$1,463 - 2,449
Over 90 Days Outstanding	$3,600	$871 - 4,244
Total	$2,006	$1,307 - 2,474
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	56.6%	47.6 - 62.0%
31-60 Days Outstanding	24.2%	14.6 - 23.2%
61-90 Days Outstanding	9.5%	6.4 - 9.2%
Over 90 Days Outstanding	9.9%	3.4 - 15.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS -- SALES OVER $9,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	76.8%	74.7 - 77.8%
Gross Margin	23.2%	21.8 - 24.0%
Operating Expenses:		
Selling Expenses	6.0%	4.9 - 7.0%
Delivery Expenses	1.9%	1.4 - 2.1%
Warehouse Expenses	2.9%	2.3 - 3.0%
General & Administrative Expenses	8.4%	6.9 - 8.3%
Occupancy Expenses	1.4%	1.0 - 1.8%
Other Operating Expenses	0.1%	0.0 - 0.0%
Total Operating Expenses	20.6%	18.8 - 21.4%
Net Operating Profit	2.6%	1.7 - 3.6%
Non-Operating Income	2.2%	1.7 - 2.6%
Non-Operating Expenses	1.6%	0.9 - 1.7%
Net Profit Before Tax	3.3%	1.5 - 3.7%
Net Profit After Tax	1.5%	1.2 - 2.2%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	20.6%	18.8 - 21.4%
Total Operating Expense to Gross Margin	89.1%	83.2 - 92.5%
Non-People Expense to Net Sales	7.2%	6.0 - 7.8%
Non-People Expense to Gross Margin	31.3%	28.9 - 33.8%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.7%	0.2 - 0.9%
Times Interest Earned	4.8X	2.0 - 17.2X
BALANCE SHEET		
Cash	2.2%	0.1 - 2.3%
Accounts & Notes Receivable, Trade(Net)	35.3%	31.1 - 39.3%
Inventory	43.1%	35.5 - 51.0%
Other Current Assets	1.0%	0.0 - 1.5%
Total Current Assets	81.6%	71.3 - 89.5%
All Other Assets	18.4%	10.2 - 24.7%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	38.5%	29.1 - 46.6%
Total Long-Term Liabilities	12.1%	5.3 - 17.1%
Total Liabilities	50.6%	34.4 - 61.7%
Total Net Worth	49.4%	35.1 - 57.4%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	14.6%	9.0 - 21.6%
Total Assets to Net Worth	1.7X	1.3 - 2.6X
Net Profit After Tax to Total Assets	8.6%	5.2 - 11.5%
Net Sales to Total Assets	2.7X	2.3 - 3.2X
Net Profit After Tax to Net Sales	2.8%	1.9 - 4.5%
Net Profit Before Tax to Net Worth	24.8%	13.5 - 27.4%
Net Profit Before Tax to Total Assets	9.5%	8.2 - 15.8%
EBIT to Total Assets	12.5%	10.7 - 18.9%
SALES ANALYSIS		
Net Sales($000)	$7,509	$4,954 - 16,814
Percent Sales Change from Prior Year	12.1%	6.2 - 18.2%
Sales Mix:		
Direct Sales	6.8%	0.2 - 13.7%
Warehouse Sales - Counter and Delivery	93.2%	86.3 - 99.8%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	39.9%	35.0 - 50.0%
Heating & Cooling Supplies & Equipment	23.3%	20.0 - 28.0%
Industrial P-V-F (Pipes-Valves-Fittings)	23.8%	12.0 - 35.0%
Other Industrial Supplies & Equipment	5.7%	0.0 - 8.0%
Other Products	7.3%	0.0 - 10.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.8%	23.0 - 27.6%
Gross Margin on Direct Shipments	10.0%	9.0 - 15.0%
Gross Margin on Warehouse Sales	25.0%	24.0 - 27.6%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.04X	2.70 - 3.52X
Total Debt to Net Worth	74.1%	32.5 - 161.3%
Current Debt to Net Worth	47.9%	30.5 - 131.1%
Current Assets to Current Debt	2.03X	1.65 - 3.83X
Current Assets Minus Inventory/Curr Debt	1.18X	0.75 - 2.20X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	4.4 - 8.0
Average Invoice Size	$170	$118 - 201
Average Billing Line	$26.00	$22.37 - 30.61

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$213,646	$178,761 - 245,262
Gross Margin Per Employee	$55,806	$49,793 - 65,268
Average Compensation Per Employee	$24,701	$23,343 - 26,674
Average Fringe Benefits Per Employee	$4,924	$3,863 - 6,195
Compensation & Fringes Per Employee	$29,848	$27,238 - 32,503
Payroll to Net Sales	11.6%	10.9 - 14.0%
Fringe Benefits to Net Sales	2.3%	1.9 - 2.8%
Payroll & Fringes to Net Sales	14.1%	13.5 - 16.1%
Payroll to Gross Margin	46.2%	43.1 - 48.4%
Fringe Benefits to Gross Margin	8.7%	7.1 - 9.8%
Payroll & Fringes to Gross Margin	53.9%	51.2 - 60.6%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.45X	2.86 - 4.95X
% of Whse Sales from Non-Stock Items	11.0%	9.0 - 20.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.11X	2.54 - 4.45X
No. of Days Average Inventory Carried	80 Days	57 - 119 Days
Total Cost of Goods Sold to Ave Inventory	4.58X	2.89 - 6.38X
Whse Gross Margin Return on Ave Inventory	144%	107 - 191%
Turn & Earn Profitability Index	110%	78 - 147%
Percent of Firms on LIFO	35.3%	
ACCOUNTS RECEIVABLE		
Average Collection Period	50 Days	47 - 59 Days
Gross Margin Return on Receivables	179%	155 - 210%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	56.2%	51.0 - 62.0%
31-60 Days Outstanding	21.2%	15.0 - 21.4%
61-90 Days Outstanding	8.6%	6.9 - 9.2%
Over 90 Days Outstanding	14.0%	5.8 - 21.6%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$856	$391 - 1,504
31-60 Days Outstanding	$1,409	$862 - 2,341
61-90 Days Outstanding	$949	$807 - 1,537
Over 90 Days Outstanding	$1,947	$993 - 3,449
Total	$1,423	$788 - 2,136
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	60.0%	45.0 - 72.3%
31-60 Days Outstanding	20.8%	14.6 - 21.2%
61-90 Days Outstanding	9.2%	6.6 - 9.9%
Over 90 Days Outstanding	9.9%	3.4 - 11.2%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HIGH PROFIT PLUMBING SUPPLIES & INDUSTRIAL P-V-F FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	73.3%	70.5 - 76.8%
Gross Margin	26.8%	23.0 - 27.6%
Operating Expenses:		
Selling Expenses	6.2%	4.9 - 7.7%
Delivery Expenses	1.7%	1.0 - 2.0%
Warehouse Expenses	2.6%	1.4 - 3.0%
General & Administrative Expenses	10.1%	7.4 - 11.0%
Occupancy Expenses	1.8%	0.8 - 1.9%
Other Operating Expenses	0.3%	0.0 - 0.0%
Total Operating Expenses	22.7%	19.1 - 23.9%
Net Operating Profit	4.1%	2.1 - 5.1%
Non-Operating Income	1.7%	1.1 - 2.4%
Non-Operating Expenses	1.2%	0.3 - 1.7%
Net Profit Before Tax	4.6%	2.7 - 5.6%
Net Profit After Tax	2.8%	1.9 - 4.5%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.7%	19.1 - 23.9%
Total Operating Expense to Gross Margin	85.2%	78.6 - 90.3%
Non-People Expense to Net Sales	7.3%	6.9 - 8.1%
Non-People Expense to Gross Margin	28.7%	25.8 - 34.0%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.5%	0.2 - 1.0%
Times Interest Earned	9.6X	4.2 - 17.3X
BALANCE SHEET		
Cash	7.0%	1.1 - 11.0%
Accounts & Notes Receivable, Trade(Net)	34.9%	28.6 - 41.1%
Inventory	42.5%	32.4 - 51.0%
Other Current Assets	1.4%	0.1 - 1.5%
Total Current Assets	85.7%	80.3 - 90.5%
All Other Assets	14.3%	6.6 - 18.7%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	36.7%	23.4 - 49.0%
Total Long-Term Liabilities	11.0%	0.0 - 11.6%
Total Liabilities	47.8%	24.5 - 64.9%
Total Net Worth	52.2%	34.7 - 73.3%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

HVAC & OTHER EXMPHASIS FIRMS

HVAC & OTHER EXMPHASIS FIRMS

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HVAC & OTHER EMPHASIS FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	11.3%	5.3 - 15.8%
Total Assets to Net Worth	1.9X	1.5 - 2.7X
Net Profit After Tax to Total Assets	5.7%	2.9 - 9.0%
Net Sales to Total Assets	2.7X	2.3 - 3.0X
Net Profit After Tax to Net Sales	2.0%	0.9 - 3.3%
Net Profit Before Tax to Net Worth	14.5%	6.9 - 21.2%
Net Profit Before Tax to Total Assets	6.7%	3.8 - 12.1%
EBIT to Total Assets	9.2%	6.1 - 12.7%
SALES ANALYSIS		
Net Sales($000)	$8,960	$5,658 - 23,342
Percent Sales Change from Prior Year	13.0%	7.4 - 19.2%
Sales Mix:		
Direct Sales	10.9%	3.0 - 15.9%
Warehouse Sales - Counter and Delivery	89.2%	84.1 - 97.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	29.4%	17.0 - 40.0%
Heating & Cooling Supplies & Equipment	26.8%	9.0 - 40.0%
Industrial P-V-F (Pipes-Valves-Fittings)	8.0%	0.0 - 10.0%
Other Industrial Supplies & Equipment	8.9%	0.0 - 8.0%
Other Products	27.0%	2.0 - 50.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.7%	21.3 - 27.0%
Gross Margin on Direct Shipments	13.4%	11.0 - 18.0%
Gross Margin on Warehouse Sales	23.9%	22.4 - 28.6%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.03X	2.58 - 3.45X
Total Debt to Net Worth	92.1%	48.3 - 169.1%
Current Debt to Net Worth	68.0%	38.4 - 133.5%
Current Assets to Current Debt	2.51X	1.71 - 3.39X
Current Assets Minus Inventory/Curr Debt	0.92X	0.70 - 1.24X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	3.5 - 6.0
Average Invoice Size	$165	$115 - 239
Average Billing Line	$34.81	$23.04 - 54.36

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HVAC & OTHER EMPHASIS FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$217,748	$185,305 - 250,288
Gross Margin Per Employee	$48,662	$42,584 - 61,769
Average Compensation Per Employee	$23,986	$22,639 - 26,660
Average Fringe Benefits Per Employee	$3,881	$2,867 - 5,529
Compensation & Fringes Per Employee	$27,678	$25,894 - 31,884
Payroll to Net Sales	11.5%	9.4 - 13.2%
Fringe Benefits to Net Sales	1.8%	1.4 - 2.6%
Payroll & Fringes to Net Sales	13.0%	11.2 - 16.0%
Payroll to Gross Margin	48.3%	42.3 - 53.6%
Fringe Benefits to Gross Margin	7.9%	6.4 - 9.2%
Payroll & Fringes to Gross Margin	54.8%	50.5 - 62.2%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.57X	3.07 - 4.49X
% of Whse Sales from Non-Stock Items	7.6%	5.0 - 15.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.45X	2.59 - 4.19X
No. of Days Average Inventory Carried	102 Days	81 - 119 Days
Total Cost of Goods Sold to Ave Inventory	4.31X	3.37 - 5.16X
Whse Gross Margin Return on Ave Inventory	120%	98 - 158%
Turn & Earn Profitability Index	90%	74 - 113%
Percent of Firms on LIFO	67.4%	
ACCOUNTS RECEIVABLE		
Average Collection Period	44 Days	38 - 50 Days
Gross Margin Return on Receivables	200%	176 - 235%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	71.4%	64.5 - 77.3%
31-60 Days Outstanding	14.8%	10.0 - 18.5%
61-90 Days Outstanding	6.4%	3.4 - 8.5%
Over 90 Days Outstanding	7.4%	3.8 - 8.0%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,106	$969 - 1,604
31-60 Days Outstanding	$1,602	$1,113 - 2,454
61-90 Days Outstanding	$1,705	$1,117 - 2,044
Over 90 Days Outstanding	$1,444	$1,074 - 2,611
Total	$1,233	$995 - 1,752
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	74.8%	69.9 - 81.1%
31-60 Days Outstanding	13.1%	8.8 - 16.4%
61-90 Days Outstanding	5.8%	3.1 - 8.9%
Over 90 Days Outstanding	6.2%	2.4 - 8.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HVAC & OTHER EMPHASIS FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.3%	72.9 - 78.6%
Gross Margin	24.7%	21.3 - 27.0%
Operating Expenses:		
Selling Expenses	6.4%	4.6 - 7.6%
Delivery Expenses	1.7%	1.0 - 2.1%
Warehouse Expenses	2.5%	1.6 - 3.1%
General & Administrative Expenses	8.7%	6.6 - 10.2%
Occupancy Expenses	1.7%	1.1 - 2.4%
Other Operating Expenses	0.4%	0.0 - 0.2%
Total Operating Expenses	21.5%	18.5 - 23.7%
Net Operating Profit	3.2%	1.5 - 4.9%
Non-Operating Income	1.9%	1.3 - 2.4%
Non-Operating Expenses	1.9%	1.0 - 2.4%
Net Profit Before Tax	3.3%	1.3 - 4.8%
Net Profit After Tax	2.0%	0.9 - 3.3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	21.5%	18.5 - 23.7%
Total Operating Expense to Gross Margin	87.5%	80.6 - 93.0%
Non-People Expense to Net Sales	7.7%	6.2 - 8.1%
Non-People Expense to Gross Margin	31.6%	24.2 - 35.7%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.5 - 1.4%
Times Interest Earned	3.8X	1.9 - 8.9X
BALANCE SHEET		
Cash	5.6%	0.5 - 4.9%
Accounts & Notes Receivable, Trade(Net)	30.1%	22.9 - 34.7%
Inventory	49.4%	43.4 - 56.7%
Other Current Assets	1.7%	0.2 - 1.8%
Total Current Assets	86.7%	84.5 - 91.1%
All Other Assets	13.3%	8.2 - 15.3%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	38.6%	26.8 - 47.8%
Total Long-Term Liabilities	11.0%	1.3 - 14.9%
Total Liabilities	49.6%	32.6 - 64.9%
Total Net Worth	50.4%	35.1 - 66.4%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES UNDER $6,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	11.3%	6.5 - 14.3%
Total Assets to Net Worth	1.7X	1.4 - 2.2X
Net Profit After Tax to Total Assets	5.4%	3.5 - 8.7%
Net Sales to Total Assets	2.5X	2.2 - 2.7X
Net Profit After Tax to Net Sales	1.9%	1.7 - 2.7%
Net Profit Before Tax to Net Worth	13.5%	6.5 - 19.7%
Net Profit Before Tax to Total Assets	6.1%	4.0 - 13.0%
EBIT to Total Assets	8.0%	3.3 - 10.1%
SALES ANALYSIS		
Net Sales($000)	$4,140	$3,150 - 5,194
Percent Sales Change from Prior Year	10.2%	2.4 - 16.4%
Sales Mix:		
Direct Sales	5.4%	1.9 - 4.2%
Warehouse Sales - Counter and Delivery	94.6%	95.8 - 98.1%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	28.0%	15.0 - 37.0%
Heating & Cooling Supplies & Equipment	33.5%	5.0 - 50.0%
Industrial P-V-F (Pipes-Valves-Fittings)	12.2%	0.0 - 20.0%
Other Industrial Supplies & Equipment	9.8%	0.0 - 5.0%
Other Products	16.4%	0.0 - 27.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.1%	21.3 - 27.2%
Gross Margin on Direct Shipments	14.9%	10.9 - 18.6%
Gross Margin on Warehouse Sales	25.2%	21.6 - 29.8%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.73X	2.47 - 3.11X
Total Debt to Net Worth	66.2%	39.0 - 117.1%
Current Debt to Net Worth	52.5%	33.5 - 83.7%
Current Assets to Current Debt	2.85X	2.14 - 3.60X
Current Assets Minus Inventory/Curr Debt	0.92X	0.77 - 1.28X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	3.3 - 5.0
Average Invoice Size	$115	$88 - 174
Average Billing Line	$27.50	$21.56 - 34.81

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES UNDER $6,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$178,465	$144,591 - 207,768
Gross Margin Per Employee	$41,401	$37,666 - 44,720
Average Compensation Per Employee	$23,026	$16,386 - 23,986
Average Fringe Benefits Per Employee	$3,500	$2,868 - 3,881
Compensation & Fringes Per Employee	$25,894	$19,775 - 27,487
Payroll to Net Sales	12.7%	10.5 - 13.4%
Fringe Benefits to Net Sales	2.0%	1.5 - 2.8%
Payroll & Fringes to Net Sales	15.4%	12.3 - 16.2%
Payroll to Gross Margin	49.4%	45.3 - 53.6%
Fringe Benefits to Gross Margin	8.5%	6.9 - 9.4%
Payroll & Fringes to Gross Margin	61.5%	54.7 - 64.1%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.17X	2.84 - 4.44X
% of Whse Sales from Non-Stock Items	9.0%	6.7 - 15.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.11X	1.77 - 4.08X
No. of Days Average Inventory Carried	115 Days	82 - 129 Days
Total Cost of Goods Sold to Ave Inventory	3.11X	2.69 - 4.66X
Whse Gross Margin Return on Ave Inventory	114%	86 - 158%
Turn & Earn Profitability Index	81%	66 - 113%
Percent of Firms on LIFO	61.5%	
ACCOUNTS RECEIVABLE		
Average Collection Period	37 Days	35 - 39 Days
Gross Margin Return on Receivables	239%	202 - 309%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	74.1%	66.3 - 77.3%
31-60 Days Outstanding	11.8%	9.6 - 13.8%
61-90 Days Outstanding	5.7%	4.1 - 7.1%
Over 90 Days Outstanding	8.4%	4.2 - 10.8%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$696	$417 - 904
31-60 Days Outstanding	$1,000	$973 - 1,566
61-90 Days Outstanding	$1,705	$583 - 1,799
Over 90 Days Outstanding	$1,444	$460 - 2,611
Total	$781	$493 - 1,117
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	79.4%	72.4 - 86.6%
31-60 Days Outstanding	10.4%	5.7 - 11.7%
61-90 Days Outstanding	4.2%	3.1 - 3.9%
Over 90 Days Outstanding	6.1%	2.2 - 8.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES UNDER $6,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.9%	72.7 - 78.2%
Gross Margin	25.1%	21.3 - 27.2%
Operating Expenses:		
Selling Expenses	6.6%	5.5 - 7.6%
Delivery Expenses	1.8%	1.1 - 2.2%
Warehouse Expenses	3.0%	2.0 - 3.3%
General & Administrative Expenses	9.1%	7.4 - 9.6%
Occupancy Expenses	1.7%	1.2 - 2.4%
Other Operating Expenses	0.1%	0.0 - 0.0%
Total Operating Expenses	22.4%	19.4 - 23.7%
Net Operating Profit	2.7%	1.4 - 4.1%
Non-Operating Income	2.1%	1.4 - 2.4%
Non-Operating Expenses	2.1%	1.2 - 2.6%
Net Profit Before Tax	2.7%	1.9 - 4.5%
Net Profit After Tax	1.9%	1.7 - 2.7%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.4%	19.4 - 23.7%
Total Operating Expense to Gross Margin	89.7%	83.6 - 91.4%
Non-People Expense to Net Sales	8.2%	7.1 - 8.6%
Non-People Expense to Gross Margin	32.8%	22.1 - 35.7%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.3 - 1.5%
Times Interest Earned	3.1X	1.9 - 7.6X
BALANCE SHEET		
Cash	6.0%	0.2 - 5.1%
Accounts & Notes Receivable, Trade(Net)	27.8%	21.9 - 31.8%
Inventory	55.1%	49.5 - 63.1%
Other Current Assets	1.0%	0.2 - 1.4%
Total Current Assets	90.0%	87.2 - 92.7%
All Other Assets	10.0%	6.8 - 12.0%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	32.7%	24.7 - 39.8%
Total Long-Term Liabilities	12.0%	0.0 - 18.5%
Total Liabilities	44.7%	28.1 - 53.9%
Total Net Worth	55.3%	44.2 - 70.2%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES $6,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	14.2%	4.6 - 17.5%
Total Assets to Net Worth	2.5X	1.4 - 2.9X
Net Profit After Tax to Total Assets	5.4%	2.0 - 11.6%
Net Sales to Total Assets	2.8X	2.3 - 3.2X
Net Profit After Tax to Net Sales	2.0%	0.4 - 4.2%
Net Profit Before Tax to Net Worth	16.3%	8.3 - 29.6%
Net Profit Before Tax to Total Assets	6.5%	3.1 - 16.2%
EBIT to Total Assets	10.2%	6.1 - 16.4%
SALES ANALYSIS		
Net Sales($000)	$8,826	$7,412 - 9,143
Percent Sales Change from Prior Year	13.0%	7.4 - 22.2%
Sales Mix:		
Direct Sales	7.6%	1.9 - 10.1%
Warehouse Sales - Counter and Delivery	92.4%	89.9 - 98.1%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	31.0%	17.0 - 40.0%
Heating & Cooling Supplies & Equipment	29.7%	10.0 - 50.0%
Industrial P-V-F (Pipes-Valves-Fittings)	7.6%	0.0 - 10.0%
Other Industrial Supplies & Equipment	7.1%	0.0 - 10.0%
Other Products	24.6%	3.3 - 34.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.5%	23.2 - 27.1%
Gross Margin on Direct Shipments	13.7%	10.7 - 20.9%
Gross Margin on Warehouse Sales	25.2%	22.9 - 30.7%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.03X	2.52 - 3.92X
Total Debt to Net Worth	153.9%	42.7 - 192.4%
Current Debt to Net Worth	104.7%	31.9 - 153.8%
Current Assets to Current Debt	2.35X	1.54 - 3.90X
Current Assets Minus Inventory/Curr Debt	0.98X	0.67 - 1.59X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	3.2 - 6.0
Average Invoice Size	$121	$117 - 197
Average Billing Line	$34.29	$29.13 - 41.72

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES $6,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$228,578	$191,880 - 251,136
Gross Margin Per Employee	$53,101	$45,992 - 65,215
Average Compensation Per Employee	$24,423	$22,471 - 27,080
Average Fringe Benefits Per Employee	$5,529	$3,825 - 6,957
Compensation & Fringes Per Employee	$29,420	$26,840 - 31,884
Payroll to Net Sales	11.6%	9.6 - 13.6%
Fringe Benefits to Net Sales	2.0%	1.5 - 3.0%
Payroll & Fringes to Net Sales	13.2%	11.7 - 17.4%
Payroll to Gross Margin	48.9%	36.9 - 53.8%
Fringe Benefits to Gross Margin	8.2%	6.8 - 12.0%
Payroll & Fringes to Gross Margin	57.2%	47.5 - 63.2%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.12X	3.46 - 5.94X
% of Whse Sales from Non-Stock Items	5.0%	2.0 - 15.0%
Cost of In-Stock Whse Sales/Ave Inventory	4.07X	2.97 - 5.65X
No. of Days Average Inventory Carried	89 Days	61 - 106 Days
Total Cost of Goods Sold to Ave Inventory	4.22X	3.41 - 6.26X
Whse Gross Margin Return on Ave Inventory	152%	120 - 163%
Turn & Earn Profitability Index	110%	89 - 129%
Percent of Firms on LIFO	40.0%	
ACCOUNTS RECEIVABLE		
Average Collection Period	45 Days	38 - 48 Days
Gross Margin Return on Receivables	216%	176 - 249%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	75.6%	67.4 - 83.1%
31-60 Days Outstanding	13.6%	9.2 - 15.9%
61-90 Days Outstanding	5.2%	2.9 - 7.4%
Over 90 Days Outstanding	5.6%	3.2 - 7.1%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,059	$980 - 1,604
31-60 Days Outstanding	$1,610	$1,125 - 2,274
61-90 Days Outstanding	$1,260	$820 - 1,640
Over 90 Days Outstanding	$1,222	$765 - 1,819
Total	$1,233	$1,055 - 1,564
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	79.1%	69.9 - 87.8%
31-60 Days Outstanding	10.9%	3.6 - 14.8%
61-90 Days Outstanding	5.6%	2.5 - 9.5%
Over 90 Days Outstanding	4.4%	1.5 - 7.9%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES $6,000,000 TO $12,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	73.5%	70.2 - 76.4%
Gross Margin	26.5%	23.2 - 27.1%
Operating Expenses:		
Selling Expenses	6.2%	4.6 - 6.9%
Delivery Expenses	1.7%	1.0 - 2.0%
Warehouse Expenses	2.5%	1.7 - 3.1%
General & Administrative Expenses	9.4%	7.3 - 11.3%
Occupancy Expenses	1.8%	1.0 - 2.5%
Other Operating Expenses	0.4%	0.0 - 0.0%
Total Operating Expenses	22.1%	18.4 - 24.7%
Net Operating Profit	4.4%	1.5 - 5.7%
Non-Operating Income	1.0%	1.0 - 2.6%
Non-Operating Expenses	2.9%	0.6 - 2.1%
Net Profit Before Tax	2.4%	0.9 - 7.3%
Net Profit After Tax	2.0%	0.4 - 4.2%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.1%	18.4 - 24.7%
Total Operating Expense to Gross Margin	84.6%	70.8 - 91.2%
Non-People Expense to Net Sales	6.9%	5.6 - 7.4%
Non-People Expense to Gross Margin	26.6%	20.8 - 29.9%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.7%	0.2 - 1.0%
Times Interest Earned	7.7X	2.0 - 18.0X
BALANCE SHEET		
Cash	8.7%	0.5 - 6.0%
Accounts & Notes Receivable, Trade(Net)	30.2%	22.9 - 34.4%
Inventory	43.4%	34.1 - 52.5%
Other Current Assets	2.6%	0.1 - 3.8%
Total Current Assets	84.9%	82.1 - 89.5%
All Other Assets	15.1%	10.5 - 17.9%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	39.4%	21.7 - 54.2%
Total Long-Term Liabilities	9.8%	4.3 - 13.4%
Total Liabilities	49.2%	29.9 - 65.8%
Total Net Worth	50.9%	34.2 - 70.1%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	10.9%	5.3 - 12.8%
Total Assets to Net Worth	1.9X	1.5 - 2.5X
Net Profit After Tax to Total Assets	5.7%	2.2 - 7.4%
Net Sales to Total Assets	2.8X	2.3 - 3.0X
Net Profit After Tax to Net Sales	2.1%	0.9 - 2.8%
Net Profit Before Tax to Net Worth	13.2%	7.2 - 20.0%
Net Profit Before Tax to Total Assets	7.8%	3.9 - 10.1%
EBIT to Total Assets	9.2%	6.7 - 12.0%
SALES ANALYSIS		
Net Sales($000)	$27,920	$18,930 - 41,084
Percent Sales Change from Prior Year	16.6%	7.6 - 18.1%
Sales Mix:		
Direct Sales	15.6%	7.2 - 21.6%
Warehouse Sales - Counter and Delivery	84.4%	75.3 - 92.7%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	29.2%	17.0 - 40.0%
Heating & Cooling Supplies & Equipment	19.2%	3.0 - 24.4%
Industrial P-V-F (Pipes-Valves-Fittings)	5.0%	0.0 - 5.0%
Other Industrial Supplies & Equipment	9.5%	0.0 - 5.0%
Other Products	37.2%	10.0 - 53.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	23.1%	20.8 - 24.6%
Gross Margin on Direct Shipments	12.5%	11.2 - 13.9%
Gross Margin on Warehouse Sales	23.4%	22.1 - 27.4%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.16X	2.95 - 3.38X
Total Debt to Net Worth	93.9%	53.9 - 148.0%
Current Debt to Net Worth	74.8%	48.9 - 129.9%
Current Assets to Current Debt	2.03X	1.52 - 2.70X
Current Assets Minus Inventory/Curr Debt	0.87X	0.68 - 1.07X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.3	3.5 - 5.0
Average Invoice Size	$216	$144 - 247
Average Billing Line	$40.61	$22.86 - 63.70

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$222,079	$199,259 - 262,416
Gross Margin Per Employee	$51,656	$47,539 - 60,240
Average Compensation Per Employee	$24,697	$22,735 - 26,660
Average Fringe Benefits Per Employee	$3,695	$2,492 - 4,471
Compensation & Fringes Per Employee	$28,563	$26,257 - 32,357
Payroll to Net Sales	10.4%	8.7 - 12.8%
Fringe Benefits to Net Sales	1.5%	1.2 - 2.0%
Payroll & Fringes to Net Sales	11.9%	10.1 - 14.3%
Payroll to Gross Margin	46.7%	41.8 - 49.2%
Fringe Benefits to Gross Margin	7.1%	5.3 - 8.1%
Payroll & Fringes to Gross Margin	53.2%	51.4 - 55.6%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.49X	3.10 - 4.22X
% of Whse Sales from Non-Stock Items	7.6%	5.0 - 12.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.18X	2.32 - 3.80X
No. of Days Average Inventory Carried	105 Days	84 - 115 Days
Total Cost of Goods Sold to Ave Inventory	4.36X	3.88 - 5.16X
Whse Gross Margin Return on Ave Inventory	111%	97 - 127%
Turn & Earn Profitability Index	81%	71 - 98%
Percent of Firms on LIFO	90.5%	
ACCOUNTS RECEIVABLE		
Average Collection Period	48 Days	44 - 50 Days
Gross Margin Return on Receivables	180%	146 - 200%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	66.6%	58.6 - 72.0%
31-60 Days Outstanding	17.7%	14.1 - 22.5%
61-90 Days Outstanding	7.7%	5.2 - 10.4%
Over 90 Days Outstanding	8.0%	4.0 - 7.2%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,508	$1,054 - 2,431
31-60 Days Outstanding	$1,958	$1,495 - 3,484
61-90 Days Outstanding	$1,945	$1,340 - 2,285
Over 90 Days Outstanding	$1,743	$1,101 - 2,239
Total	$1,655	$1,158 - 2,498
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	67.3%	58.2 - 74.9%
31-60 Days Outstanding	17.3%	12.1 - 19.9%
61-90 Days Outstanding	7.2%	4.2 - 8.9%
Over 90 Days Outstanding	8.2%	5.7 - 9.7%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HVAC & OTHER FIRMS -- SALES OVER $12,000,000

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	77.0%	74.6 - 79.2%
Gross Margin	23.1%	20.8 - 24.6%
Operating Expenses:		
Selling Expenses	6.4%	4.3 - 7.3%
Delivery Expenses	1.7%	1.2 - 1.9%
Warehouse Expenses	2.1%	1.3 - 2.9%
General & Administrative Expenses	7.9%	5.2 - 9.2%
Occupancy Expenses	1.6%	1.2 - 2.0%
Other Operating Expenses	0.7%	0.0 - 0.0%
Total Operating Expenses	20.3%	18.3 - 22.3%
Net Operating Profit	2.8%	1.6 - 4.0%
Non-Operating Income	1.7%	1.1 - 2.2%
Non-Operating Expenses	1.9%	1.3 - 2.3%
Net Profit Before Tax	2.6%	1.3 - 4.4%
Net Profit After Tax	2.1%	0.9 - 2.8%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	20.3%	18.3 - 22.3%
Total Operating Expense to Gross Margin	87.7%	80.6 - 91.4%
Non-People Expense to Net Sales	8.0%	6.7 - 8.1%
Non-People Expense to Gross Margin	34.4%	25.2 - 38.3%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.0%	0.8 - 1.4%
Times Interest Earned	3.5X	1.8 - 4.6X
BALANCE SHEET		
Cash	2.8%	0.5 - 3.0%
Accounts & Notes Receivable, Trade(Net)	31.9%	26.3 - 35.0%
Inventory	49.1%	43.6 - 55.2%
Other Current Assets	1.6%	0.2 - 0.8%
Total Current Assets	85.4%	85.2 - 89.8%
All Other Assets	14.6%	8.9 - 14.6%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	42.9%	32.1 - 45.6%
Total Long-Term Liabilities	11.1%	2.1 - 12.5%
Total Liabilities	54.0%	35.0 - 61.8%
Total Net Worth	46.0%	35.1 - 64.9%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HIGH PROFIT HVAC & OTHER FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	14.5%	12.4 - 19.1%
Total Assets to Net Worth	1.5X	1.4 - 2.0X
Net Profit After Tax to Total Assets	9.4%	6.8 - 11.6%
Net Sales to Total Assets	2.8X	2.2 - 3.2X
Net Profit After Tax to Net Sales	3.4%	2.7 - 4.6%
Net Profit Before Tax to Net Worth	20.1%	16.3 - 30.6%
Net Profit Before Tax to Total Assets	12.2%	10.1 - 16.2%
EBIT to Total Assets	15.1%	11.3 - 18.3%
SALES ANALYSIS		
Net Sales($000)	$11,360	$5,889 - 30,485
Percent Sales Change from Prior Year	17.1%	7.9 - 19.7%
Sales Mix:		
Direct Sales	11.5%	2.2 - 19.9%
Warehouse Sales - Counter and Delivery	88.5%	80.1 - 97.8%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	27.8%	20.0 - 37.0%
Heating & Cooling Supplies & Equipment	24.6%	9.0 - 39.0%
Industrial P-V-F (Pipes-Valves-Fittings)	9.9%	0.1 - 12.0%
Other Industrial Supplies & Equipment	7.2%	0.0 - 8.0%
Other Products	30.6%	10.0 - 51.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.2%	22.7 - 29.8%
Gross Margin on Direct Shipments	13.9%	11.0 - 18.0%
Gross Margin on Warehouse Sales	25.8%	23.4 - 30.7%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.29X	2.53 - 3.53X
Total Debt to Net Worth	51.0%	41.7 - 100.7%
Current Debt to Net Worth	47.4%	35.1 - 83.0%
Current Assets to Current Debt	2.77X	1.83 - 3.60X
Current Assets Minus Inventory/Curr Debt	1.08X	0.87 - 1.61X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.3	3.3 - 6.0
Average Invoice Size	$203	$119 - 242
Average Billing Line	$38.11	$22.86 - 59.00

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HIGH PROFIT HVAC & OTHER FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$223,573	$194,934 - 250,288
Gross Margin Per Employee	$57,883	$47,224 - 66,929
Average Compensation Per Employee	$24,423	$22,961 - 29,232
Average Fringe Benefits Per Employee	$4,201	$2,868 - 6,042
Compensation & Fringes Per Employee	$28,563	$26,257 - 35,239
Payroll to Net Sales	11.8%	9.4 - 13.4%
Fringe Benefits to Net Sales	2.0%	1.5 - 2.7%
Payroll & Fringes to Net Sales	13.5%	11.2 - 16.0%
Payroll to Gross Margin	45.3%	41.8 - 49.1%
Fringe Benefits to Gross Margin	7.9%	6.7 - 8.9%
Payroll & Fringes to Gross Margin	53.2%	50.4 - 55.6%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.00X	3.24 - 4.90X
% of Whse Sales from Non-Stock Items	6.7%	5.0 - 10.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.80X	3.18 - 4.70X
No. of Days Average Inventory Carried	91 Days	74 - 113 Days
Total Cost of Goods Sold to Ave Inventory	4.50X	3.84 - 5.35X
Whse Gross Margin Return on Ave Inventory	151%	114 - 179%
Turn & Earn Profitability Index	101%	75 - 121%
Percent of Firms on LIFO	60.0%	
ACCOUNTS RECEIVABLE		
Average Collection Period	44 Days	37 - 50 Days
Gross Margin Return on Receivables	231%	180 - 250%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	70.5%	65.6 - 76.9%
31-60 Days Outstanding	15.8%	13.4 - 19.4%
61-90 Days Outstanding	7.0%	3.4 - 10.2%
Over 90 Days Outstanding	6.7%	3.7 - 8.0%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,037	$904 - 2,161
31-60 Days Outstanding	$1,602	$1,344 - 2,274
61-90 Days Outstanding	$1,640	$632 - 2,044
Over 90 Days Outstanding	$1,603	$875 - 2,239
Total	$1,125	$867 - 1,655
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	74.2%	70.0 - 84.8%
31-60 Days Outstanding	13.8%	10.0 - 17.4%
61-90 Days Outstanding	6.2%	3.1 - 9.0%
Over 90 Days Outstanding	5.8%	2.3 - 8.3%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

HIGH PROFIT HVAC & OTHER FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	73.8%	70.2 - 76.8%
Gross Margin	26.2%	22.7 - 29.8%
Operating Expenses:		
Selling Expenses	5.9%	4.6 - 7.1%
Delivery Expenses	1.6%	1.0 - 2.1%
Warehouse Expenses	2.6%	1.6 - 2.9%
General & Administrative Expenses	8.3%	5.9 - 9.5%
Occupancy Expenses	1.8%	1.3 - 2.5%
Other Operating Expenses	0.7%	0.0 - 0.4%
Total Operating Expenses	20.9%	18.3 - 23.6%
Net Operating Profit	5.3%	3.9 - 5.9%
Non-Operating Income	2.0%	1.0 - 2.6%
Non-Operating Expenses	1.7%	0.9 - 1.9%
Net Profit Before Tax	5.7%	4.0 - 6.5%
Net Profit After Tax	3.4%	2.7 - 4.6%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	20.9%	18.3 - 23.6%
Total Operating Expense to Gross Margin	80.0%	77.5 - 84.0%
Non-People Expense to Net Sales	6.9%	5.5 - 7.6%
Non-People Expense to Gross Margin	26.3%	21.5 - 29.6%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.8%	0.3 - 1.0%
Times Interest Earned	7.6X	4.0 - 14.5X
BALANCE SHEET		
Cash	9.4%	0.7 - 8.4%
Accounts & Notes Receivable, Trade(Net)	29.6%	23.0 - 34.7%
Inventory	45.3%	36.1 - 52.5%
Other Current Assets	2.3%	0.3 - 2.1%
Total Current Assets	86.6%	83.8 - 91.1%
All Other Assets	13.4%	8.9 - 16.2%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	34.6%	24.9 - 42.8%
Total Long-Term Liabilities	6.0%	0.0 - 7.2%
Total Liabilities	40.6%	29.4 - 50.2%
Total Net Worth	59.4%	49.8 - 70.6%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

ALL REPORTING FIRMS

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

ALL FIRMS

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	12.5%	6.2 - 18.5%
Total Assets to Net Worth	2.1X	1.5 - 3.0X
Net Profit After Tax to Total Assets	5.6%	2.8 - 9.3%
Net Sales to Total Assets	2.7X	2.3 - 3.1X
Net Profit After Tax to Net Sales	1.9%	1.1 - 3.6%
Net Profit Before Tax to Net Worth	17.1%	7.8 - 26.0%
Net Profit Before Tax to Total Assets	6.6%	3.5 - 12.2%
EBIT to Total Assets	10.1%	6.5 - 14.6%
SALES ANALYSIS		
Net Sales($000)	$7,489	$4,503 - 15,980
Percent Sales Change from Prior Year	11.3%	5.4 - 19.1%
Sales Mix:		
Direct Sales	10.0%	3.0 - 14.1%
Warehouse Sales - Counter and Delivery	90.0%	85.3 - 97.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	53.9%	33.0 - 80.0%
Heating & Cooling Supplies & Equipment	14.4%	0.0 - 25.0%
Industrial P-V-F (Pipes-Valves-Fittings)	19.9%	0.0 - 25.0%
Other Industrial Supplies & Equipment	3.7%	0.0 - 4.0%
Other Products	8.1%	0.0 - 10.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.3%	22.1 - 27.7%
Gross Margin on Direct Shipments	12.0%	9.6 - 17.6%
Gross Margin on Warehouse Sales	25.6%	22.9 - 28.9%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.10X	2.63 - 3.53X
Total Debt to Net Worth	110.6%	53.7 - 202.8%
Current Debt to Net Worth	83.6%	44.2 - 162.7%
Current Assets to Current Debt	2.21X	1.59 - 3.01X
Current Assets Minus Inventory/Curr Debt	0.96X	0.71 - 1.42X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	4.2 - 7.0
Average Invoice Size	$198	$130 - 277
Average Billing Line	$32.80	$23.04 - 54.16

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

ALL FIRMS

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$220,921	$185,690 - 272,085
Gross Margin Per Employee	$54,635	$45,929 - 67,872
Average Compensation Per Employee	$25,830	$22,701 - 30,829
Average Fringe Benefits Per Employee	$4,546	$3,525 - 5,974
Compensation & Fringes Per Employee	$29,997	$26,425 - 37,212
Payroll to Net Sales	11.8%	10.2 - 13.7%
Fringe Benefits to Net Sales	2.0%	1.5 - 2.7%
Payroll & Fringes to Net Sales	13.9%	11.9 - 16.4%
Payroll to Gross Margin	48.2%	43.0 - 53.0%
Fringe Benefits to Gross Margin	8.3%	6.6 - 10.2%
Payroll & Fringes to Gross Margin	56.5%	51.4 - 62.2%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.74X	3.06 - 4.77X
% of Whse Sales from Non-Stock Items	10.0%	5.0 - 20.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.35X	2.54 - 4.19X
No. of Days Average Inventory Carried	98 Days	77 - 119 Days
Total Cost of Goods Sold to Ave Inventory	4.50X	3.37 - 5.63X
Whse Gross Margin Return on Ave Inventory	131%	107 - 165%
Turn & Earn Profitability Index	96%	78 - 122%
Percent of Firms on LIFO	49.8%	
ACCOUNTS RECEIVABLE		
Average Collection Period	49 Days	42 - 57 Days
Gross Margin Return on Receivables	179%	152 - 219%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	65.2%	56.6 - 73.6%
31-60 Days Outstanding	17.4%	13.2 - 20.8%
61-90 Days Outstanding	7.5%	4.5 - 9.8%
Over 90 Days Outstanding	10.0%	4.4 - 13.5%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,470	$969 - 2,313
31-60 Days Outstanding	$1,713	$973 - 2,930
61-90 Days Outstanding	$1,537	$949 - 2,753
Over 90 Days Outstanding	$1,848	$1,127 - 3,449
Total	$1,502	$1,019 - 2,195
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	68.2%	57.6 - 77.1%
31-60 Days Outstanding	16.7%	11.7 - 21.0%
61-90 Days Outstanding	7.2%	3.8 - 9.5%
Over 90 Days Outstanding	7.9%	4.0 - 10.3%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

ALL FIRMS

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.7%	72.3 - 77.9%
Gross Margin	25.3%	22.1 - 27.7%
Operating Expenses:		
Selling Expenses	6.0%	4.4 - 7.7%
Delivery Expenses	1.8%	1.0 - 2.2%
Warehouse Expenses	2.5%	1.4 - 3.2%
General & Administrative Expenses	9.4%	6.7 - 11.2%
Occupancy Expenses	2.0%	1.1 - 2.6%
Other Operating Expenses	0.7%	0.0 - 0.3%
Total Operating Expenses	22.3%	19.0 - 24.7%
Net Operating Profit	3.0%	1.3 - 4.8%
Non-Operating Income	1.8%	1.1 - 2.5%
Non-Operating Expenses	1.8%	0.9 - 2.4%
Net Profit Before Tax	3.1%	1.3 - 4.7%
Net Profit After Tax	1.9%	1.1 - 3.6%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.3%	19.0 - 24.7%
Total Operating Expense to Gross Margin	88.4%	81.2 - 94.2%
Non-People Expense to Net Sales	7.9%	6.3 - 8.6%
Non-People Expense to Gross Margin	31.4%	25.2 - 35.4%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.5 - 1.5%
Times Interest Earned	4.3X	2.1 - 8.9X
BALANCE SHEET		
Cash	5.4%	0.5 - 5.5%
Accounts & Notes Receivable, Trade(Net)	33.4%	26.5 - 39.9%
Inventory	46.5%	39.2 - 54.5%
Other Current Assets	1.5%	0.2 - 1.7%
Total Current Assets	86.7%	82.8 - 92.5%
All Other Assets	13.3%	7.5 - 17.1%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	40.9%	27.8 - 53.7%
Total Long-Term Liabilities	11.8%	1.3 - 18.5%
Total Liabilities	52.7%	35.0 - 67.7%
Total Net Worth	47.4%	32.1 - 64.9%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

LARGE VOLUME FIRMS

(Those with Sales Volume of $50 Million & Over)

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

ALL FIRMS WITH SALES VOLUME OF $50 MILLION & OVER

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	9.0%	3.0 - 12.6%
Total Assets to Net Worth	1.9X	1.7 - 2.6X
Net Profit After Tax to Total Assets	3.7%	1.4 - 5.2%
Net Sales to Total Assets	2.5X	2.3 - 2.9X
Net Profit After Tax to Net Sales	1.6%	0.5 - 2.0%
Net Profit Before Tax to Net Worth	15.6%	5.0 - 20.0%
Net Profit Before Tax to Total Assets	6.0%	2.4 - 8.9%
EBIT to Total Assets	8.5%	4.0 - 10.7%
SALES ANALYSIS		
Net Sales($000)	$61,868	$59,859 - 101,585
Percent Sales Change from Prior Year	17.1%	8.0 - 19.6%
Sales Mix:		
Direct Sales	15.7%	11.3 - 19.0%
Warehouse Sales - Counter and Delivery	84.3%	81.0 - 88.7%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	50.6%	33.0 - 65.0%
Heating & Cooling Supplies & Equipment	16.3%	0.0 - 15.0%
Industrial P-V-F (Pipes-Valves-Fittings)	16.5%	0.0 - 10.0%
Other Industrial Supplies & Equipment	1.4%	0.0 - 0.0%
Other Products	15.2%	2.0 - 13.7%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	20.5%	19.2 - 21.3%
Gross Margin on Direct Shipments	9.0%	8.7 - 13.6%
Gross Margin on Warehouse Sales	22.4%	21.5 - 23.8%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.38X	2.83 - 3.52X
Total Debt to Net Worth	86.4%	74.1 - 161.9%
Current Debt to Net Worth	64.5%	54.0 - 123.6%
Current Assets to Current Debt	1.83X	1.50 - 2.38X
Current Assets Minus Inventory/Curr Debt	0.82X	0.64 - 1.30X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.4	4.3 - 5.0
Average Invoice Size	$234	$183 - 264
Average Billing Line	$45.63	$30.43 - 67.58

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

ALL FIRMS WITH SALES VOLUME OF $50 MILLION & OVER

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$272,085	$248,499 - 297,452
Gross Margin Per Employee	$59,721	$47,788 - 70,539
Average Compensation Per Employee	$26,674	$23,180 - 32,045
Average Fringe Benefits Per Employee	$4,368	$4,007 - 5,997
Compensation & Fringes Per Employee	$31,121	$27,187 - 38,042
Payroll to Net Sales	9.6%	8.7 - 10.2%
Fringe Benefits to Net Sales	1.7%	1.5 - 1.9%
Payroll & Fringes to Net Sales	11.3%	10.1 - 11.9%
Payroll to Gross Margin	45.4%	44.7 - 48.7%
Fringe Benefits to Gross Margin	8.3%	7.9 - 8.5%
Payroll & Fringes to Gross Margin	53.9%	52.8 - 56.6%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.36X	3.48 - 4.86X
% of Whse Sales from Non-Stock Items	5.4%	4.0 - 15.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.75X	2.96 - 4.67X
No. of Days Average Inventory Carried	84 Days	75 - 105 Days
Total Cost of Goods Sold to Ave Inventory	5.32X	4.15 - 5.63X
Whse Gross Margin Return on Ave Inventory	119%	116 - 140%
Turn & Earn Profitability Index	96%	88 - 109%
Percent of Firms on LIFO	88.9%	
ACCOUNTS RECEIVABLE		
Average Collection Period	51 Days	47 - 57 Days
Gross Margin Return on Receivables	130%	116 - 155%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	64.9%	58.6 - 66.6%
31-60 Days Outstanding	17.2%	15.1 - 20.5%
61-90 Days Outstanding	7.7%	6.2 - 10.0%
Over 90 Days Outstanding	10.1%	5.7 - 16.5%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	INSUFFICIENT DATA	
31-60 Days Outstanding	INSUFFICIENT DATA	
61-90 Days Outstanding	INSUFFICIENT DATA	
Over 90 Days Outstanding	INSUFFICIENT DATA	
Total	$2,452	
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	INSUFFICIENT DATA	
31-60 Days Outstanding	INSUFFICIENT DATA	
61-90 Days Outstanding	INSUFFICIENT DATA	
Over 90 Days Outstanding	INSUFFICIENT DATA	
Total	INSUFFICIENT DATA	

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

ALL FIRMS WITH SALES VOLUME OF $50 MILLION & OVER

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	79.5%	78.7 - 80.8%
Gross Margin	20.5%	19.2 - 21.3%
Operating Expenses:		
Selling Expenses	4.1%	4.1 - 4.7%
Delivery Expenses	1.5%	1.4 - 1.9%
Warehouse Expenses	2.5%	2.0 - 2.5%
General & Administrative Expenses	7.8%	7.0 - 9.3%
Occupancy Expenses	1.6%	1.3 - 1.9%
Other Operating Expenses	0.0%	0.0 - 0.0%
Total Operating Expenses	17.5%	16.3 - 19.1%
Net Operating Profit	2.9%	1.3 - 3.9%
Non-Operating Income	1.6%	1.3 - 1.7%
Non-Operating Expenses	1.9%	1.3 - 2.4%
Net Profit Before Tax	2.7%	0.8 - 3.4%
Net Profit After Tax	1.6%	0.5 - 2.0%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	17.5%	16.3 - 19.1%
Total Operating Expense to Gross Margin	85.8%	78.5 - 93.4%
Non-People Expense to Net Sales	6.4%	5.1 - 7.2%
Non-People Expense to Gross Margin	31.2%	23.6 - 33.6%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.0%	0.2 - 1.2%
Times Interest Earned	3.5X	2.2 - 4.9X
BALANCE SHEET		
Cash	1.1%	0.4 - 1.6%
Accounts & Notes Receivable, Trade(Net)	34.7%	29.6 - 37.0%
Inventory	40.4%	37.7 - 45.4%
Other Current Assets	1.6%	0.4 - 1.5%
Total Current Assets	77.9%	73.3 - 85.2%
All Other Assets	22.1%	14.3 - 25.0%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	40.4%	29.0 - 40.0%
Total Long-Term Liabilities	14.5%	10.6 - 17.7%
Total Liabilities	54.9%	42.6 - 61.8%
Total Net Worth	45.1%	32.3 - 53.9%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

ALL FIRMS BY GEOGRAPHIC REGION

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

NEWA REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	15.0%	8.6 - 23.1%
Total Assets to Net Worth	2.2X	1.5 - 3.0X
Net Profit After Tax to Total Assets	7.7%	5.1 - 10.9%
Net Sales to Total Assets	2.6X	2.1 - 3.0X
Net Profit After Tax to Net Sales	3.3%	1.9 - 4.4%
Net Profit Before Tax to Net Worth	20.3%	13.9 - 29.0%
Net Profit Before Tax to Total Assets	10.7%	7.9 - 14.6%
EBIT to Total Assets	12.4%	6.9 - 15.9%
SALES ANALYSIS		
Net Sales($000)	$7,337	$5,709 - 16,381
Percent Sales Change from Prior Year	8.5%	0.6 - 17.2%
Sales Mix:		
Direct Sales	5.9%	2.0 - 9.0%
Warehouse Sales - Counter and Delivery	94.1%	91.0 - 98.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	54.1%	40.0 - 64.0%
Heating & Cooling Supplies & Equipment	25.7%	20.0 - 33.0%
Industrial P-V-F (Pipes-Valves-Fittings)	13.0%	0.0 - 20.0%
Other Industrial Supplies & Equipment	1.9%	0.0 - 2.0%
Other Products	5.3%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	27.7%	24.7 - 30.1%
Gross Margin on Direct Shipments	15.0%	9.6 - 18.0%
Gross Margin on Warehouse Sales	26.8%	25.6 - 29.5%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.95X	2.66 - 3.45X
Total Debt to Net Worth	118.5%	48.3 - 197.0%
Current Debt to Net Worth	74.8%	37.2 - 150.1%
Current Assets to Current Debt	2.04X	1.76 - 3.35X
Current Assets Minus Inventory/Curr Debt	0.95X	0.86 - 1.49X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	7.0	4.6 - 9.5
Average Invoice Size	$190	$133 - 234
Average Billing Line	$25.65	$19.58 - 32.80

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

NEWA REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$223,573	$194,934 - 302,559
Gross Margin Per Employee	$60,058	$51,893 - 77,512
Average Compensation Per Employee	$26,984	$23,514 - 35,347
Average Fringe Benefits Per Employee	$5,082	$3,985 - 6,816
Compensation & Fringes Per Employee	$31,976	$28,686 - 42,786
Payroll to Net Sales	12.7%	10.3 - 14.5%
Fringe Benefits to Net Sales	2.3%	1.9 - 2.9%
Payroll & Fringes to Net Sales	14.1%	12.9 - 16.8%
Payroll to Gross Margin	45.5%	41.5 - 50.0%
Fringe Benefits to Gross Margin	7.9%	6.6 - 11.7%
Payroll & Fringes to Gross Margin	52.8%	48.9 - 60.7%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.22X	3.10 - 5.45X
% of Whse Sales from Non-Stock Items	10.0%	5.6 - 15.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.63X	2.82 - 4.65X
No. of Days Average Inventory Carried	85 Days	67 - 102 Days
Total Cost of Goods Sold to Ave Inventory	4.66X	3.41 - 6.03X
Whse Gross Margin Return on Ave Inventory	169%	123 - 197%
Turn & Earn Profitability Index	121%	91 - 145%
Percent of Firms on LIFO	34.8%	
ACCOUNTS RECEIVABLE		
Average Collection Period	55 Days	48 - 62 Days
Gross Margin Return on Receivables	181%	155 - 203%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	57.0%	47.5 - 69.3%
31-60 Days Outstanding	20.8%	14.7 - 22.3%
61-90 Days Outstanding	10.1%	7.5 - 11.0%
Over 90 Days Outstanding	12.1%	6.9 - 14.0%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,959	$1,319 - 2,313
31-60 Days Outstanding	$2,274	$1,217 - 3,412
61-90 Days Outstanding	$2,279	$1,463 - 3,102
Over 90 Days Outstanding	$2,674	$1,457 - 3,754
Total	$2,136	$1,460 - 2,703
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	56.4%	42.7 - 65.8%
31-60 Days Outstanding	21.9%	13.9 - 23.2%
61-90 Days Outstanding	10.6%	7.4 - 13.0%
Over 90 Days Outstanding	11.1%	6.8 - 11.5%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

NEWA REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	72.3%	69.9 - 75.3%
Gross Margin	27.7%	24.7 - 30.1%
Operating Expenses:		
Selling Expenses	4.9%	3.5 - 5.9%
Delivery Expenses	3.1%	1.9 - 3.8%
Warehouse Expenses	2.4%	1.3 - 3.7%
General & Administrative Expenses	10.8%	8.7 - 12.4%
Occupancy Expenses	2.0%	1.3 - 2.9%
Other Operating Expenses	0.2%	0.0 - 0.1%
Total Operating Expenses	23.5%	20.0 - 27.2%
Net Operating Profit	4.2%	1.9 - 5.9%
Non-Operating Income	1.6%	0.4 - 2.5%
Non-Operating Expenses	1.4%	0.3 - 1.9%
Net Profit Before Tax	4.3%	2.1 - 6.0%
Net Profit After Tax	3.3%	1.9 - 4.4%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	23.5%	20.0 - 27.2%
Total Operating Expense to Gross Margin	84.8%	77.5 - 92.5%
Non-People Expense to Net Sales	8.1%	6.7 - 8.4%
Non-People Expense to Gross Margin	29.6%	24.9 - 32.0%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.1%	0.5 - 1.5%
Times Interest Earned	4.7X	3.2 - 7.2X
BALANCE SHEET		
Cash	5.2%	0.4 - 4.9%
Accounts & Notes Receivable, Trade(Net)	35.3%	24.4 - 44.9%
Inventory	43.1%	38.0 - 49.7%
Other Current Assets	2.2%	0.3 - 2.3%
Total Current Assets	85.8%	79.8 - 92.2%
All Other Assets	14.2%	7.8 - 20.2%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	37.9%	26.3 - 49.0%
Total Long-Term Liabilities	13.2%	1.3 - 19.3%
Total Liabilities	51.1%	32.6 - 66.3%
Total Net Worth	48.9%	33.7 - 67.5%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

NYSPHW REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	18.0%	14.2 - 25.7%
Total Assets to Net Worth	2.1X	1.5 - 2.6X
Net Profit After Tax to Total Assets	10.0%	6.8 - 11.6%
Net Sales to Total Assets	2.8X	2.4 - 3.1X
Net Profit After Tax to Net Sales	3.7%	2.2 - 4.8%
Net Profit Before Tax to Net Worth	25.9%	20.1 - 43.3%
Net Profit Before Tax to Total Assets	13.3%	9.3 - 18.2%
EBIT to Total Assets	16.4%	11.8 - 20.9%
SALES ANALYSIS		
Net Sales($000)	$8,318	$5,788 - 14,154
Percent Sales Change from Prior Year	13.8%	11.6 - 18.1%
Sales Mix:		
Direct Sales	9.1%	1.0 - 12.5%
Warehouse Sales - Counter and Delivery	90.8%	84.8 - 95.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	49.2%	33.0 - 51.0%
Heating & Cooling Supplies & Equipment	18.4%	5.0 - 30.0%
Industrial P-V-F (Pipes-Valves-Fittings)	19.9%	1.0 - 12.0%
Other Industrial Supplies & Equipment	3.6%	0.0 - 4.0%
Other Products	8.9%	0.0 - 10.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.9%	23.3 - 27.1%
Gross Margin on Direct Shipments	12.0%	10.0 - 20.9%
Gross Margin on Warehouse Sales	27.3%	25.2 - 30.7%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.04X	2.72 - 3.48X
Total Debt to Net Worth	110.4%	45.1 - 164.0%
Current Debt to Net Worth	94.6%	38.8 - 114.5%
Current Assets to Current Debt	2.27X	1.78 - 3.19X
Current Assets Minus Inventory/Curr Debt	1.23X	0.75 - 2.01X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	8.0	6.0 - 9.0
Average Invoice Size	$151	$120 - 197
Average Billing Line	$18.88	$15.07 - 28.51

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

NYSPHW REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$197,408	$182,711 - 234,510
Gross Margin Per Employee	$55,806	$45,992 - 62,105
Average Compensation Per Employee	$24,133	$22,471 - 27,330
Average Fringe Benefits Per Employee	$3,825	$3,525 - 4,902
Compensation & Fringes Per Employee	$27,985	$26,295 - 33,525
Payroll to Net Sales	12.3%	11.1 - 12.9%
Fringe Benefits to Net Sales	2.4%	1.5 - 2.5%
Payroll & Fringes to Net Sales	14.2%	13.7 - 15.3%
Payroll to Gross Margin	43.5%	42.3 - 48.9%
Fringe Benefits to Gross Margin	8.3%	5.8 - 9.0%
Payroll & Fringes to Gross Margin	51.5%	50.1 - 55.6%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.57X	3.25 - 4.55X
% of Whse Sales from Non-Stock Items	11.0%	4.0 - 20.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.40X	2.54 - 4.23X
No. of Days Average Inventory Carried	102 Days	80 - 112 Days
Total Cost of Goods Sold to Ave Inventory	4.72X	3.79 - 6.29X
Whse Gross Margin Return on Ave Inventory	153%	139 - 179%
Turn & Earn Profitability Index	107%	90 - 124%
Percent of Firms on LIFO	30.8%	
ACCOUNTS RECEIVABLE		
Average Collection Period	53 Days	48 - 57 Days
Gross Margin Return on Receivables	175%	167 - 190%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	62.7%	49.4 - 67.5%
31-60 Days Outstanding	19.2%	18.0 - 20.9%
61-90 Days Outstanding	7.3%	3.8 - 9.3%
Over 90 Days Outstanding	10.9%	2.0 - 15.5%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,028	$906 - 1,424
31-60 Days Outstanding	$906	$731 - 1,424
61-90 Days Outstanding	$820	$632 - 1,424
Over 90 Days Outstanding	$765	$333 - 2,239
Total	$888	$867 - 1,309
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	64.9%	56.5 - 72.3%
31-60 Days Outstanding	17.3%	14.6 - 20.5%
61-90 Days Outstanding	8.3%	6.0 - 9.1%
Over 90 Days Outstanding	9.5%	5.1 - 8.6%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

NYSPHW REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.1%	72.5 - 76.5%
Gross Margin	25.9%	23.3 - 27.1%
Operating Expenses:		
Selling Expenses	6.0%	3.5 - 6.9%
Delivery Expenses	1.4%	0.9 - 2.0%
Warehouse Expenses	2.0%	1.0 - 1.9%
General & Administrative Expenses	8.1%	6.8 - 8.2%
Occupancy Expenses	1.9%	0.9 - 2.5%
Other Operating Expenses	1.9%	0.0 - 2.4%
Total Operating Expenses	21.2%	18.5 - 23.6%
Net Operating Profit	4.7%	2.5 - 6.3%
Non-Operating Income	1.6%	0.8 - 1.9%
Non-Operating Expenses	1.1%	0.2 - 1.4%
Net Profit Before Tax	5.2%	2.7 - 6.5%
Net Profit After Tax	3.7%	2.2 - 4.8%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	21.2%	18.5 - 23.6%
Total Operating Expense to Gross Margin	82.0%	73.8 - 87.1%
Non-People Expense to Net Sales	7.3%	5.5 - 8.3%
Non-People Expense to Gross Margin	27.7%	20.2 - 29.9%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.5%	0.2 - 0.9%
Times Interest Earned	11.2X	4.3 - 31.2X
BALANCE SHEET		
Cash	8.0%	1.0 - 12.4%
Accounts & Notes Receivable, Trade(Net)	33.6%	28.6 - 38.9%
Inventory	44.6%	36.9 - 52.9%
Other Current Assets	1.2%	0.1 - 1.0%
Total Current Assets	87.3%	86.7 - 91.2%
All Other Assets	12.7%	8.9 - 13.3%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	38.5%	27.2 - 49.0%
Total Long-Term Liabilities	10.4%	2.8 - 18.5%
Total Liabilities	48.9%	31.1 - 62.1%
Total Net Worth	51.1%	37.9 - 68.9%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

MAWA REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	15.8%	7.7 - 23.8%
Total Assets to Net Worth	2.7X	1.7 - 3.2X
Net Profit After Tax to Total Assets	5.5%	1.9 - 11.5%
Net Sales to Total Assets	2.9X	2.8 - 3.6X
Net Profit After Tax to Net Sales	1.9%	0.6 - 3.1%
Net Profit Before Tax to Net Worth	19.1%	9.1 - 33.8%
Net Profit Before Tax to Total Assets	7.4%	2.7 - 13.3%
EBIT to Total Assets	10.6%	7.9 - 14.9%
SALES ANALYSIS		
Net Sales($000)	$6,187	$4,447 - 12,835
Percent Sales Change from Prior Year	13.3%	5.4 - 20.0%
Sales Mix:		
Direct Sales	8.3%	1.8 - 11.[illegible]
Warehouse Sales - Counter and Delivery	91.7%	88.3 - 98.1%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	53.5%	40.0 - 65.0%
Heating & Cooling Supplies & Equipment	26.9%	10.0 - 40.0%
Industrial P-V-F (Pipes-Valves-Fittings)	12.7%	0.0 - 15.0%
Other Industrial Supplies & Equipment	2.2%	0.0 - 2.0%
Other Products	4.7%	0.0 - 10.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.6%	22.4 - 27.1%
Gross Margin on Direct Shipments	11.7%	9.5 - 14.9%
Gross Margin on Warehouse Sales	24.6%	22.6 - 28.9%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.52X	3.03 - 4.14X
Total Debt to Net Worth	169.1%	74.1 - 221.5%
Current Debt to Net Worth	127.3%	64.5 - 175.2%
Current Assets to Current Debt	1.69X	1.52 - 2.55X
Current Assets Minus Inventory/Curr Debt	0.92X	0.77 - 1.40X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	4.4 - 6.0
Average Invoice Size	$201	$137 - 455
Average Billing Line	$34.98	$29.87 - 52.80

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

MAWA REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$245,497	$217,895 - 292,997
Gross Margin Per Employee	$56,408	$49,683 - 68,420
Average Compensation Per Employee	$27,080	$22,639 - 31,319
Average Fringe Benefits Per Employee	$4,556	$3,854 - 6,425
Compensation & Fringes Per Employee	$31,599	$26,840 - 38,056
Payroll to Net Sales	11.4%	9.8 - 13.1%
Fringe Benefits to Net Sales	2.0%	1.8 - 2.4%
Payroll & Fringes to Net Sales	13.5%	11.5 - 15.7%
Payroll to Gross Margin	48.9%	44.6 - 53.8%
Fringe Benefits to Gross Margin	8.3%	7.2 - 9.8%
Payroll & Fringes to Gross Margin	58.2%	50.6 - 61.8%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	5.17X	4.12 - 6.52X
% of Whse Sales from Non-Stock Items	10.0%	5.0 - 15.8%
Cost of In-Stock Whse Sales/Ave Inventory	4.55X	3.80 - 6.19X
No. of Days Average Inventory Carried	69 Days	55 - 82 Days
Total Cost of Goods Sold to Ave Inventory	6.20X	4.51 - 7.87X
Whse Gross Margin Return on Ave Inventory	159%	146 - 230%
Turn & Earn Profitability Index	132%	110 - 158%
Percent of Firms on LIFO	26.1%	
ACCOUNTS RECEIVABLE		
Average Collection Period	55 Days	46 - 59 Days
Gross Margin Return on Receivables	163%	140 - 177%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	58.9%	50.5 - 62.0%
31-60 Days Outstanding	18.9%	15.7 - 20.5%
61-90 Days Outstanding	9.5%	7.9 - 12.0%
Over 90 Days Outstanding	12.7%	5.4 - 17.3%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,251	$1,025 - 1,672
31-60 Days Outstanding	$1,877	$1,344 - 2,453
61-90 Days Outstanding	$1,725	$1,338 - 2,449
Over 90 Days Outstanding	$2,423	$1,418 - 3,963
Total	$1,361	$1,117 - 1,970
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	70.4%	62.0 - 80.9%
31-60 Days Outstanding	15.9%	11.7 - 20.2%
61-90 Days Outstanding	6.7%	3.1 - 6.7%
Over 90 Days Outstanding	7.0%	3.0 - 8.4%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

MAWA REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.4%	71.9 - 77.6%
Gross Margin	25.6%	22.4 - 27.1%
Operating Expenses:		
Selling Expenses	6.3%	4.4 - 9.2%
Delivery Expenses	1.8%	1.0 - 2.1%
Warehouse Expenses	1.8%	1.0 - 2.7%
General & Administrative Expenses	10.2%	7.0 - 11.9%
Occupancy Expenses	1.9%	0.7 - 2.4%
Other Operating Expenses	0.4%	0.0 - 0.0%
Total Operating Expenses	22.4%	18.5 - 25.4%
Net Operating Profit	3.2%	1.4 - 4.2%
Non-Operating Income	1.3%	0.3 - 1.9%
Non-Operating Expenses	1.1%	0.1 - 1.5%
Net Profit Before Tax	3.3%	1.1 - 4.5%
Net Profit After Tax	1.9%	0.6 - 3.1%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.4%	18.5 - 25.4%
Total Operating Expense to Gross Margin	88.1%	83.7 - 92.8%
Non-People Expense to Net Sales	7.3%	5.5 - 8.6%
Non-People Expense to Gross Margin	30.0%	24.1 - 35.0%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.6%	0.3 - 0.9%
Times Interest Earned	4.5X	2.7 - 12.4X
BALANCE SHEET		
Cash	7.2%	1.4 - 6.0%
Accounts & Notes Receivable, Trade(Net)	39.6%	32.1 - 46.5%
Inventory	39.9%	33.2 - 47.8%
Other Current Assets	1.3%	0.3 - 1.4%
Total Current Assets	87.9%	84.0 - 94.5%
All Other Assets	12.1%	5.5 - 16.0%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	47.0%	35.9 - 56.1%
Total Long-Term Liabilities	9.8%	0.5 - 17.6%
Total Liabilities	56.7%	42.6 - 68.9%
Total Net Worth	43.3%	31.1 - 57.4%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

CWA REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	12.4%	6.2 - 17.9%
Total Assets to Net Worth	2.2X	1.5 - 3.1X
Net Profit After Tax to Total Assets	5.4%	2.9 - 8.4%
Net Sales to Total Assets	2.7X	2.4 - 3.3X
Net Profit After Tax to Net Sales	1.8%	1.2 - 3.1%
Net Profit Before Tax to Net Worth	18.0%	6.9 - 28.2%
Net Profit Before Tax to Total Assets	6.4%	4.2 - 10.9%
EBIT to Total Assets	10.1%	6.3 - 12.7%
SALES ANALYSIS		
Net Sales($000)	$5,874	$3,381 - 9,277
Percent Sales Change from Prior Year	10.8%	6.9 - 18.0%
Sales Mix:		
Direct Sales	10.6%	3.0 - 15.0%
Warehouse Sales - Counter and Delivery	89.4%	84.1 - 96.9%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	43.3%	20.0 - 61.0%
Heating & Cooling Supplies & Equipment	13.5%	0.0 - 22.0%
Industrial P-V-F (Pipes-Valves-Fittings)	19.2%	0.0 - 30.0%
Other Industrial Supplies & Equipment	7.7%	0.0 - 5.4%
Other Products	16.2%	0.0 - 30.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	24.9%	21.8 - 27.3%
Gross Margin on Direct Shipments	12.1%	9.0 - 17.1%
Gross Margin on Warehouse Sales	25.9%	22.6 - 28.9%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.12X	2.62 - 3.78X
Total Debt to Net Worth	117.6%	52.3 - 214.0%
Current Debt to Net Worth	92.9%	43.6 - 188.8%
Current Assets to Current Debt	2.07X	1.57 - 3.01X
Current Assets Minus Inventory/Curr Debt	0.87X	0.66 - 1.19X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	3.9 - 5.0
Average Invoice Size	$163	$103 - 244
Average Billing Line	$34.81	$21.56 - 59.00

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

CWA REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$201,345	$176,800 - 230,287
Gross Margin Per Employee	$48,573	$43,881 - 60,240
Average Compensation Per Employee	$23,986	$22,599 - 26,660
Average Fringe Benefits Per Employee	$4,077	$3,500 - 4,806
Compensation & Fringes Per Employee	$28,279	$26,178 - 32,177
Payroll to Net Sales	12.1%	10.4 - 14.5%
Fringe Benefits to Net Sales	2.1%	1.5 - 2.6%
Payroll & Fringes to Net Sales	14.0%	12.1 - 17.2%
Payroll to Gross Margin	48.8%	44.1 - 53.8%
Fringe Benefits to Gross Margin	8.1%	7.6 - 9.7%
Payroll & Fringes to Gross Margin	57.5%	51.8 - 62.2%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.56X	2.77 - 5.09X
% of Whse Sales from Non-Stock Items	10.0%	5.0 - 23.7%
Cost of In-Stock Whse Sales/Ave Inventory	3.11X	2.31 - 4.21X
No. of Days Average Inventory Carried	103 Days	72 - 132 Days
Total Cost of Goods Sold to Ave Inventory	4.21X	3.10 - 5.66X
Whse Gross Margin Return on Ave Inventory	127%	103 - 163%
Turn & Earn Profitability Index	98%	77 - 122%
Percent of Firms on LIFO	56.1%	
ACCOUNTS RECEIVABLE		
Average Collection Period	45 Days	37 - 50 Days
Gross Margin Return on Receivables	207%	176 - 239%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	69.6%	61.4 - 75.7%
31-60 Days Outstanding	15.7%	11.6 - 18.8%
61-90 Days Outstanding	6.5%	3.9 - 8.4%
Over 90 Days Outstanding	8.3%	4.4 - 11.6%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$969	$735 - 1,604
31-60 Days Outstanding	$1,434	$954 - 1,769
61-90 Days Outstanding	$1,260	$893 - 1,578
Over 90 Days Outstanding	$1,455	$975 - 2,386
Total	$1,133	$819 - 1,341
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	73.1%	61.4 - 86.6%
31-60 Days Outstanding	14.2%	7.9 - 20.3%
61-90 Days Outstanding	6.2%	3.1 - 9.6%
Over 90 Days Outstanding	6.6%	2.3 - 7.9%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

CWA REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	75.1%	72.7 - 77.6%
Gross Margin	24.9%	21.8 - 27.3%
Operating Expenses:		
Selling Expenses	6.9%	4.9 - 8.2%
Delivery Expenses	1.7%	1.1 - 2.1%
Warehouse Expenses	2.8%	1.7 - 3.4%
General & Administrative Expenses	8.3%	6.4 - 9.6%
Occupancy Expenses	1.8%	1.2 - 2.3%
Other Operating Expenses	0.3%	0.0 - 0.3%
Total Operating Expenses	21.9%	19.3 - 24.1%
Net Operating Profit	3.0%	1.4 - 4.1%
Non-Operating Income	1.8%	1.3 - 2.4%
Non-Operating Expenses	2.0%	1.2 - 2.6%
Net Profit Before Tax	2.8%	1.3 - 3.4%
Net Profit After Tax	1.8%	1.2 - 3.1%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	21.9%	19.3 - 24.1%
Total Operating Expense to Gross Margin	87.9%	81.2 - 94.1%
Non-People Expense to Net Sales	7.8%	7.2 - 8.5%
Non-People Expense to Gross Margin	31.1%	27.6 - 35.4%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.0%	0.5 - 1.4%
Times Interest Earned	3.9X	2.0 - 8.9X
BALANCE SHEET		
Cash	3.9%	0.3 - 4.9%
Accounts & Notes Receivable, Trade(Net)	31.6%	24.8 - 38.5%
Inventory	50.8%	44.7 - 58.6%
Other Current Assets	1.3%	0.3 - 1.5%
Total Current Assets	87.5%	85.2 - 91.9%
All Other Assets	12.5%	8.1 - 14.8%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	43.1%	31.1 - 57.5%
Total Long-Term Liabilities	11.3%	0.8 - 19.1%
Total Liabilities	54.4%	35.1 - 69.1%
Total Net Worth	45.6%	30.9 - 64.9%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

SWA REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	10.9%	4.6 - 15.0%
Total Assets to Net Worth	2.0X	1.6 - 3.0X
Net Profit After Tax to Total Assets	4.1%	2.8 - 7.2%
Net Sales to Total Assets	2.7X	2.3 - 3.0X
Net Profit After Tax to Net Sales	1.6%	0.9 - 2.8%
Net Profit Before Tax to Net Worth	12.1%	5.9 - 23.8%
Net Profit Before Tax to Total Assets	6.0%	3.3 - 9.4%
EBIT to Total Assets	8.5%	5.3 - 11.2%
SALES ANALYSIS		
Net Sales($000)	$9,688	$4,561 - 17,077
Percent Sales Change from Prior ~~Year~~	6.1%	2.9 - 14.8%
Sales Mix:		
Direct Sales	11.5%	6.2 - 17.4%
Warehouse Sales - Counter and Delivery	88.5%	82.7 - 93.8%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	63.8%	50.0 - 90.0%
Heating & Cooling Supplies & Equipment	5.7%	0.0 - 10.0%
Industrial P-V-F (Pipes-Valves-Fittings)	18.7%	0.0 - 15.0%
Other Industrial Supplies & Equipment	2.2%	0.0 - 0.0%
Other Products	9.8%	0.0 - 10.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	23.1%	20.5 - 24.0%
Gross Margin on Direct Shipments	12.7%	8.9 - 16.9%
Gross Margin on Warehouse Sales	23.5%	22.2 - 24.4%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.11X	2.67 - 3.58X
Total Debt to Net Worth	94.8%	59.8 - 199.8%
Current Debt to Net Worth	62.2%	38.5 - 123.6%
Current Assets to Current Debt	2.70X	1.61 - 3.71X
Current Assets Minus Inventory/Curr Debt	1.26X	0.79 - 1.69X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	5.0 - 7.1
Average Invoice Size	$164	$135 - 292
Average Billing Line	$31.98	$20.97 - 61.26

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

SWA REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$187,320	$171,650 - 248,499
Gross Margin Per Employee	$45,438	$39,824 - 49,462
Average Compensation Per Employee	$22,435	$19,548 - 26,125
Average Fringe Benefits Per Employee	$3,376	$2,221 - 4,453
Compensation & Fringes Per Employee	$26,763	$21,770 - 29,266
Payroll to Net Sales	11.0%	10.1 - 12.8%
Fringe Benefits to Net Sales	1.6%	1.4 - 2.1%
Payroll & Fringes to Net Sales	12.5%	11.8 - 15.1%
Payroll to Gross Margin	50.2%	48.1 - 52.2%
Fringe Benefits to Gross Margin	6.9%	5.9 - 8.8%
Payroll & Fringes to Gross Margin	57.4%	55.0 - 60.4%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.73X	3.18 - 4.21X
% of Whse Sales from Non-Stock Items	8.0%	5.0 - 13.8%
Cost of In-Stock Whse Sales/Ave Inventory	3.38X	2.95 - 3.66X
No. of Days Average Inventory Carried	98 Days	87 - 115 Days
Total Cost of Goods Sold to Ave Inventory	4.18X	3.46 - 5.23X
Whse Gross Margin Return on Ave Inventory	110%	84 - 135%
Turn & Earn Profitability Index	87%	65 - 99%
Percent of Firms on LIFO	56.5%	
ACCOUNTS RECEIVABLE		
Average Collection Period	47 Days	42 - 57 Days
Gross Margin Return on Receivables	163%	140 - 199%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	67.5%	59.3 - 73.6%
31-60 Days Outstanding	15.9%	13.3 - 20.0%
61-90 Days Outstanding	5.4%	4.2 - 7.3%
Over 90 Days Outstanding	11.2%	5.4 - 16.5%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,869	$1,032 - 3,164
31-60 Days Outstanding	$1,512	$950 - 3,302
61-90 Days Outstanding	$1,336	$633 - 2,418
Over 90 Days Outstanding	$1,850	$1,385 - 2,677
Total	$1,740	$1,207 - 2,007
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	65.3%	55.8 - 75.3%
31-60 Days Outstanding	19.2%	10.9 - 23.2%
61-90 Days Outstanding	6.9%	3.6 - 7.7%
Over 90 Days Outstanding	8.7%	5.5 - 12.0%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

SWA REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	76.9%	75.8 - 78.5%
Gross Margin	23.1%	20.5 - 24.0%
Operating Expenses:		
Selling Expenses	5.6%	4.1 - 7.1%
Delivery Expenses	1.4%	0.9 - 1.9%
Warehouse Expenses	2.3%	1.5 - 2.6%
General & Administrative Expenses	8.9%	6.5 - 9.5%
Occupancy Expenses	2.4%	1.5 - 2.9%
Other Operating Expenses	0.5%	0.0 - 0.0%
Total Operating Expenses	21.0%	18.6 - 21.8%
Net Operating Profit	2.0%	0.7 - 3.1%
Non-Operating Income	2.0%	1.2 - 2.4%
Non-Operating Expenses	2.0%	1.2 - 2.4%
Net Profit Before Tax	2.0%	0.9 - 3.0%
Net Profit After Tax	1.6%	0.9 - 2.8%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	21.0%	18.6 - 21.8%
Total Operating Expense to Gross Margin	91.0%	84.8 - 96.1%
Non-People Expense to Net Sales	7.8%	6.5 - 8.2%
Non-People Expense to Gross Margin	33.5%	29.3 - 37.9%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.0%	0.5 - 1.6%
Times Interest Earned	3.0X	1.7 - 4.9X
BALANCE SHEET		
Cash	6.0%	0.7 - 4.3%
Accounts & Notes Receivable, Trade(Net)	31.7%	25.0 - 37.7%
Inventory	46.9%	40.0 - 52.7%
Other Current Assets	1.2%	0.3 - 1.5%
Total Current Assets	85.7%	81.3 - 91.1%
All Other Assets	14.3%	8.5 - 17.9%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	36.5%	20.3 - 52.4%
Total Long-Term Liabilities	14.7%	1.9 - 23.0%
Total Liabilities	51.2%	35.8 - 66.7%
Total Net Worth	48.8%	32.3 - 62.6%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

MAD REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	12.9%	8.4 - 19.3%
Total Assets to Net Worth	2.0X	1.5 - 2.6X
Net Profit After Tax to Total Assets	7.3%	3.6 - 9.6%
Net Sales to Total Assets	2.5X	2.3 - 3.0X
Net Profit After Tax to Net Sales	2.8%	1.4 - 3.7%
Net Profit Before Tax to Net Worth	20.6%	12.6 - 22.8%
Net Profit Before Tax to Total Assets	8.5%	4.8 - 13.9%
EBIT to Total Assets	9.8%	6.7 - 13.9%
SALES ANALYSIS		
Net Sales($000)	$8,752	$5,422 - 21,728
Percent Sales Change from Prior Year	15.3%	6.0 - 23.8%
Sales Mix:		
Direct Sales	9.1%	1.6 - 11.9%
Warehouse Sales - Counter and Delivery	90.9%	83.0 - 98.2%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	57.6%	37.0 - 80.0%
Heating & Cooling Supplies & Equipment	7.8%	0.0 - 15.0%
Industrial P-V-F (Pipes-Valves-Fittings)	25.6%	0.0 - 25.0%
Other Industrial Supplies & Equipment	2.9%	0.0 - 4.0%
Other Products	6.0%	0.0 - 5.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.1%	22.8 - 29.1%
Gross Margin on Direct Shipments	11.6%	11.0 - 17.1%
Gross Margin on Warehouse Sales	25.8%	23.8 - 27.8%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.09X	2.73 - 3.41X
Total Debt to Net Worth	100.8%	51.7 - 159.6%
Current Debt to Net Worth	77.1%	48.1 - 156.7%
Current Assets to Current Debt	1.94X	1.56 - 2.58X
Current Assets Minus Inventory/Curr Debt	0.96X	0.63 - 1.12X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	6.0	5.0 - 8.0
Average Invoice Size	$229	$153 - 264
Average Billing Line	$30.85	$21.20 - 61.74

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

MAD REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$271,099	$215,150 - 297,452
Gross Margin Per Employee	$70,821	$63,987 - 75,509
Average Compensation Per Employee	$30,839	$25,963 - 32,581
Average Fringe Benefits Per Employee	$5,883	$4,800 - 8,460
Compensation & Fringes Per Employee	$38,042	$29,487 - 39,519
Payroll to Net Sales	11.6%	10.8 - 12.9%
Fringe Benefits to Net Sales	2.4%	1.8 - 3.1%
Payroll & Fringes to Net Sales	13.7%	12.9 - 15.7%
Payroll to Gross Margin	43.5%	39.9 - 47.3%
Fringe Benefits to Gross Margin	8.6%	6.7 - 11.9%
Payroll & Fringes to Gross Margin	54.9%	50.3 - 59.4%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	4.02X	3.72 - 4.56X
% of Whse Sales from Non-Stock Items	15.0%	5.0 - 24.3%
Cost of In-Stock Whse Sales/Ave Inventory	2.56X	2.39 - 3.50X
No. of Days Average Inventory Carried	91 Days	80 - 98 Days
Total Cost of Goods Sold to Ave Inventory	4.84X	3.80 - 5.34X
Whse Gross Margin Return on Ave Inventory	137%	114 - 172%
Turn & Earn Profitability Index	89%	79 - 104%
Percent of Firms on LIFO	50.0%	
ACCOUNTS RECEIVABLE		
Average Collection Period	50 Days	44 - 56 Days
Gross Margin Return on Receivables	179%	152 - 205%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	63.8%	57.3 - 66.8%
31-60 Days Outstanding	18.6%	13.4 - 20.2%
61-90 Days Outstanding	8.6%	5.0 - 11.0%
Over 90 Days Outstanding	9.0%	3.5 - 9.0%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,929	$1,223 - 2,314
31-60 Days Outstanding	$1,872	$1,162 - 2,939
61-90 Days Outstanding	$2,046	$1,593 - 3,407
Over 90 Days Outstanding	$2,503	$1,511 - 3,600
Total	$1,951	$1,678 - 2,320
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	69.8%	63.0 - 75.8%
31-60 Days Outstanding	16.7%	14.0 - 19.5%
61-90 Days Outstanding	7.5%	5.3 - 8.9%
Over 90 Days Outstanding	6.1%	4.0 - 8.1%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

MAD REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	73.9%	70.9 - 77.2%
Gross Margin	26.1%	22.8 - 29.1%
Operating Expenses:		
Selling Expenses	6.5%	5.7 - 7.8%
Delivery Expenses	1.9%	1.2 - 2.2%
Warehouse Expenses	2.0%	1.3 - 3.0%
General & Administrative Expenses	9.8%	6.4 - 11.5%
Occupancy Expenses	1.7%	0.9 - 2.3%
Other Operating Expenses	0.1%	0.0 - 0.0%
Total Operating Expenses	22.1%	19.2 - 24.9%
Net Operating Profit	4.0%	2.9 - 5.3%
Non-Operating Income	1.4%	1.1 - 1.7%
Non-Operating Expenses	2.3%	1.2 - 2.7%
Net Profit Before Tax	3.2%	2.0 - 4.8%
Net Profit After Tax	2.8%	1.4 - 3.7%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.1%	19.2 - 24.9%
Total Operating Expense to Gross Margin	84.8%	79.8 - 89.4%
Non-People Expense to Net Sales	7.6%	6.0 - 8.6%
Non-People Expense to Gross Margin	29.6%	25.0 - 31.1%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.8 - 1.3%
Times Interest Earned	3.8X	2.6 - 6.0X
BALANCE SHEET		
Cash	5.1%	0.1 - 4.3%
Accounts & Notes Receivable, Trade(Net)	33.8%	29.9 - 39.1%
Inventory	47.3%	42.3 - 52.2%
Other Current Assets	1.5%	0.3 - 2.1%
Total Current Assets	87.7%	81.6 - 92.3%
All Other Assets	12.3%	6.7 - 17.3%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	44.3%	30.2 - 57.6%
Total Long-Term Liabilities	8.9%	0.4 - 12.0%
Total Liabilities	53.2%	34.1 - 63.3%
Total Net Worth	46.8%	31.6 - 53.7%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

METRO CHICAGO & NORTHERN IL REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	16.8%	7.4 - 24.1%
Total Assets to Net Worth	1.6X	1.5 - 2.6X
Net Profit After Tax to Total Assets	11.3%	2.5 - 13.0%
Net Sales to Total Assets	2.4X	2.1 - 3.1X
Net Profit After Tax to Net Sales	4.9%	0.7 - 5.5%
Net Profit Before Tax to Net Worth	24.3%	8.2 - 24.8%
Net Profit Before Tax to Total Assets	15.5%	2.8 - 16.3%
EBIT to Total Assets	17.0%	
SALES ANALYSIS		
Net Sales($000)	$5,588	$4,059 - 6,901
Percent Sales Change from Prior Year	8.9%	
Sales Mix:		
Direct Sales	14.3%	
Warehouse Sales - Counter and Delivery	85.7%	
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	31.6%	1.0 - 22.8%
Heating & Cooling Supplies & Equipment	9.8%	0.0 - 5.0%
Industrial P-V-F (Pipes-Valves-Fittings)	57.8%	30.0 - 90.0%
Other Industrial Supplies & Equipment	0.3%	0.0 - 0.0%
Other Products	0.5%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	34.5%	24.0 - 31.8%
Gross Margin on Direct Shipments	INSUFFICIENT DATA	
Gross Margin on Warehouse Sales	33.4%	
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.29X	2.55 - 3.92X
Total Debt to Net Worth	63.7%	48.8 - 160.7%
Current Debt to Net Worth	50.2%	38.0 - 92.8%
Current Assets to Current Debt	2.58X	1.74 - 2.91X
Current Assets Minus Inventory/Curr Debt	1.37X	1.09 - 1.51X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	
Average Invoice Size	$300	
Average Billing Line	$56.71	

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

METRO CHICAGO & NORTHERN IL REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$250,955	
Gross Margin Per Employee	$67,872	
Average Compensation Per Employee	$34,124	
Average Fringe Benefits Per Employee	$6,718	
Compensation & Fringes Per Employee	$40,842	
Payroll to Net Sales	13.7%	
Fringe Benefits to Net Sales	3.3%	
Payroll & Fringes to Net Sales	18.0%	
Payroll to Gross Margin	44.7%	
Fringe Benefits to Gross Margin	9.3%	
Payroll & Fringes to Gross Margin	57.5%	
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.90X	
% of Whse Sales from Non-Stock Items	15.3%	
Cost of In-Stock Whse Sales/Ave Inventory	3.11X	
No. of Days Average Inventory Carried	94 Days	
Total Cost of Goods Sold to Ave Inventory	4.58X	
Whse Gross Margin Return on Ave Inventory	195%	
Turn & Earn Profitability Index	110%	
Percent of Firms on LIFO	80.0%	
ACCOUNTS RECEIVABLE		
Average Collection Period	49 Days	
Gross Margin Return on Receivables	179%	
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	55.4%	
31-60 Days Outstanding	27.2%	
61-90 Days Outstanding	10.0%	
Over 90 Days Outstanding	7.5%	
Total	100.0%	
Average Account Balance:		
Current (0-30 Days Outstanding)	INSUFFICIENT DATA	
31-60 Days Outstanding	INSUFFICIENT DATA	
61-90 Days Outstanding	INSUFFICIENT DATA	
Over 90 Days Outstanding	INSUFFICIENT DATA	
Total	INSUFFICIENT DATA	
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	INSUFFICIENT DATA	
31-60 Days Outstanding	INSUFFICIENT DATA	
61-90 Days Outstanding	INSUFFICIENT DATA	
Over 90 Days Outstanding	INSUFFICIENT DATA	
Total	INSUFFICIENT DATA	

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

METRO CHICAGO & NORTHERN IL REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	65.5%	64.8 - 72.4%
Gross Margin	34.5%	24.0 - 31.8%
Operating Expenses:		
Selling Expenses	5.4%	1.9 - 6.6%
Delivery Expenses	2.4%	1.0 - 2.8%
Warehouse Expenses	3.8%	2.6 - 3.9%
General & Administrative Expenses	15.4%	9.1 - 14.7%
Occupancy Expenses	3.2%	1.5 - 3.2%
Other Operating Expenses	0.1%	0.0 - 0.0%
Total Operating Expenses	30.3%	22.8 - 31.1%
Net Operating Profit	4.2%	1.1 - 5.1%
Non-Operating Income	3.1%	1.6 - 2.1%
Non-Operating Expenses	1.5%	0.9 - 1.9%
Net Profit Before Tax	5.8%	0.9 - 6.6%
Net Profit After Tax	4.9%	0.7 - 5.5%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	30.3%	22.8 - 31.1%
Total Operating Expense to Gross Margin	88.0%	79.2 - 89.7%
Non-People Expense to Net Sales	11.8%	
Non-People Expense to Gross Margin	30.7%	
INTEREST EXPENSE		
Interest Expense to Net Sales	0.6%	
Times Interest Earned	6.7X	
BALANCE SHEET		
Cash	13.7%	3.3 - 15.8%
Accounts & Notes Receivable, Trade(Net)	35.1%	24.5 - 39.3%
Inventory	36.7%	25.9 - 38.0%
Other Current Assets	1.6%	0.0 - 1.9%
Total Current Assets	87.0%	89.3 - 91.9%
All Other Assets	13.0%	6.1 - 9.6%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	38.6%	24.7 - 35.6%
Total Long-Term Liabilities	9.5%	3.7 - 10.2%
Total Liabilities	48.1%	32.8 - 61.6%
Total Net Worth	51.9%	34.1 - 65.1%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

MASA REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	12.3%	6.7 - 15.8%
Total Assets to Net Worth	1.8X	1.5 - 2.6X
Net Profit After Tax to Total Assets	5.2%	3.3 - 8.6%
Net Sales to Total Assets	2.7X	2.2 - 3.0X
Net Profit After Tax to Net Sales	2.0%	1.2 - 3.3%
Net Profit Before Tax to Net Worth	15.1%	7.7 - 23.4%
Net Profit Before Tax to Total Assets	6.2%	4.0 - 10.8%
EBIT to Total Assets	9.3%	6.4 - 14.1%
SALES ANALYSIS		
Net Sales($000)	$10,378	$5,685 - 23,342
Percent Sales Change from Prior Year	13.5%	7.7 - 17.8%
Sales Mix:		
Direct Sales	12.1%	5.0 - 15.0%
Warehouse Sales - Counter and Delivery	87.9%	85.0 - 95.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	52.9%	35.0 - 68.0%
Heating & Cooling Supplies & Equipment	16.4%	3.0 - 27.0%
Industrial P-V-F (Pipes-Valves-Fittings)	17.6%	0.0 - 30.0%
Other Industrial Supplies & Equipment	3.7%	0.0 - 3.0%
Other Products	9.4%	0.0 - 10.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	23.9%	21.4 - 25.5%
Gross Margin on Direct Shipments	12.0%	10.2 - 15.5%
Gross Margin on Warehouse Sales	25.1%	23.2 - 27.4%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.98X	2.58 - 3.31X
Total Debt to Net Worth	78.6%	52.3 - 161.3%
Current Debt to Net Worth	66.2%	46.2 - 129.2%
Current Assets to Current Debt	2.40X	1.76 - 2.98X
Current Assets Minus Inventory/Curr Debt	0.94X	0.74 - 1.21X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	4.8	3.5 - 6.0
Average Invoice Size	$176	$130 - 225
Average Billing Line	$34.35	$27.67 - 54.16

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

MASA REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$222,079	$199,823 - 247,855
Gross Margin Per Employee	$51,405	$43,225 - 61,031
Average Compensation Per Employee	$26,044	$22,718 - 30,306
Average Fringe Benefits Per Employee	$4,377	$3,689 - 5,109
Compensation & Fringes Per Employee	$30,612	$26,425 - 35,399
Payroll to Net Sales	11.6%	10.1 - 13.1%
Fringe Benefits to Net Sales	2.0%	1.5 - 2.5%
Payroll & Fringes to Net Sales	13.9%	11.9 - 14.8%
Payroll to Gross Margin	48.5%	46.2 - 54.4%
Fringe Benefits to Gross Margin	8.4%	6.9 - 9.7%
Payroll & Fringes to Gross Margin	56.1%	53.2 - 62.6%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.38X	3.01 - 4.13X
% of Whse Sales from Non-Stock Items	10.0%	5.0 - 18.5%
Cost of In-Stock Whse Sales/Ave Inventory	2.97X	2.40 - 3.80X
No. of Days Average Inventory Carried	107 Days	88 - 119 Days
Total Cost of Goods Sold to Ave Inventory	3.88X	3.10 - 4.92X
Whse Gross Margin Return on Ave Inventory	115%	102 - 135%
Turn & Earn Profitability Index	88%	76 - 101%
Percent of Firms on LIFO	70.7%	
ACCOUNTS RECEIVABLE		
Average Collection Period	46 Days	41 - 52 Days
Gross Margin Return on Receivables	179%	153 - 213%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	66.8%	59.0 - 74.3%
31-60 Days Outstanding	16.5%	13.0 - 18.5%
61-90 Days Outstanding	8.1%	5.3 - 10.4%
Over 90 Days Outstanding	8.6%	3.8 - 10.3%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,647	$1,054 - 2,172
31-60 Days Outstanding	$1,824	$1,552 - 2,790
61-90 Days Outstanding	$1,552	$1,135 - 3,238
Over 90 Days Outstanding	$1,848	$1,101 - 3,138
Total	$1,527	$1,128 - 2,169
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	69.0%	56.9 - 76.8%
31-60 Days Outstanding	15.9%	11.4 - 18.2%
61-90 Days Outstanding	7.5%	5.1 - 9.2%
Over 90 Days Outstanding	7.7%	4.1 - 9.7%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

MASA REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	76.1%	73.6 - 78.3%
Gross Margin	23.9%	21.4 - 25.5%
Operating Expenses:		
Selling Expenses	6.1%	4.7 - 7.5%
Delivery Expenses	1.5%	1.0 - 1.9%
Warehouse Expenses	2.9%	1.8 - 3.4%
General & Administrative Expenses	8.3%	6.3 - 9.7%
Occupancy Expenses	1.6%	1.0 - 2.4%
Other Operating Expenses	0.3%	0.0 - 0.0%
Total Operating Expenses	20.6%	18.6 - 22.3%
Net Operating Profit	3.3%	1.8 - 4.6%
Non-Operating Income	2.2%	1.4 - 2.6%
Non-Operating Expenses	2.2%	1.3 - 2.7%
Net Profit Before Tax	3.3%	1.7 - 4.7%
Net Profit After Tax	2.0%	1.2 - [illegible]3%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	20.6%	18.6 - 22.3%
Total Operating Expense to Gross Margin	86.5%	80.6 - 91.0%
Non-People Expense to Net Sales	6.8%	5.9 - 7.8%
Non-People Expense to Gross Margin	28.8%	22.4 - 33.7%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.5 - 1.5%
Times Interest Earned	3.9X	2.2 - 7.6X
BALANCE SHEET		
Cash	4.6%	0.3 - 3.4%
Accounts & Notes Receivable, Trade(Net)	30.9%	24.0 - 36.3%
Inventory	50.5%	43.6 - 56.5%
Other Current Assets	1.8%	0.2 - 1.5%
Total Current Assets	87.8%	84.2 - 92.5%
All Other Assets	12.2%	7.1 - 15.5%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	38.5%	29.1 - 46.0%
Total Long-Term Liabilities	9.7%	0.1 - 13.3%
Total Liabilities	48.2%	34.4 - 61.7%
Total Net Worth	51.8%	34.4 - 65.0%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

WDA REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	5.0%	0.0 - 10.9%
Total Assets to Net Worth	1.9X	1.2 - 2.5X
Net Profit After Tax to Total Assets	2.0%	-1.1 - 5.5%
Net Sales to Total Assets	2.4X	2.0 - 2.7X
Net Profit After Tax to Net Sales	0.9%	0.2 - 2.0%
Net Profit Before Tax to Net Worth	6.6%	1.4 - 11.6%
Net Profit Before Tax to Total Assets	2.6%	-1.1 - 6.0%
EBIT to Total Assets	7.1%	0.8 - 8.6%
SALES ANALYSIS		
Net Sales($000)	$4,924	$2,601 - 10,068
Percent Sales Change from Prior Year	7.3%	-1.3 - 12.5%
Sales Mix:		
Direct Sales	5.4%	0.2 - 8.9%
Warehouse Sales - Counter and Delivery	94.6%	91.1 - 99.8%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	62.7%	34.0 - 95.0%
Heating & Cooling Supplies & Equipment	9.7%	0.0 - 20.0%
Industrial P-V-F (Pipes-Valves-Fittings)	19.4%	0.0 - 15.0%
Other Industrial Supplies & Equipment	4.0%	0.0 - 0.0%
Other Products	4.3%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	26.4%	21.5 - 28.2%
Gross Margin on Direct Shipments	15.0%	11.3 - 20.0%
Gross Margin on Warehouse Sales	26.2%	22.4 - 28.6%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.89X	2.49 - 3.29X
Total Debt to Net Worth	89.9%	23.5 - 150.5%
Current Debt to Net Worth	54.9%	23.0 - 96.0%
Current Assets to Current Debt	2.57X	1.53 - 4.66X
Current Assets Minus Inventory/Curr Debt	1.05X	0.69 - 1.73X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.0	4.0 - 7.0
Average Invoice Size	$150	$86 - 256
Average Billing Line	$29.15	$17.42 - 41.46

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

WDA REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$185,060	$143,054 - 202,519
Gross Margin Per Employee	$46,975	$39,931 - 52,830
Average Compensation Per Employee	$22,830	$19,416 - 25,446
Average Fringe Benefits Per Employee	$3,579	$2,699 - 4,459
Compensation & Fringes Per Employee	$26,280	$23,094 - 28,742
Payroll to Net Sales	12.1%	10.6 - 14.2%
Fringe Benefits to Net Sales	1.7%	1.3 - 2.7%
Payroll & Fringes to Net Sales	14.3%	11.5 - 16.4%
Payroll to Gross Margin	48.0%	42.6 - 52.2%
Fringe Benefits to Gross Margin	7.3%	5.5 - 9.7%
Payroll & Fringes to Gross Margin	53.3%	51.7 - 60.3%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	3.17X	2.67 - 3.82X
% of Whse Sales from Non-Stock Items	9.0%	5.0 - 15.0%
Cost of In-Stock Whse Sales/Ave Inventory	2.98X	2.41 - 3.04X
No. of Days Average Inventory Carried	115 Days	96 - 137 Days
Total Cost of Goods Sold to Ave Inventory	3.80X	2.75 - 4.84X
Whse Gross Margin Return on Ave Inventory	107%	99 - 136%
Turn & Earn Profitability Index	76%	71 - 105%
Percent of Firms on LIFO	45.0%	
ACCOUNTS RECEIVABLE		
Average Collection Period	47 Days	39 - 53 Days
Gross Margin Return on Receivables	188%	151 - 240%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	68.0%	59.5 - 78.9%
31-60 Days Outstanding	14.0%	8.3 - 20.3%
61-90 Days Outstanding	5.7%	4.2 - 7.1%
Over 90 Days Outstanding	12.2%	4.0 - 18.2%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,064	$512 - 1,508
31-60 Days Outstanding	$863	$658 - 1,113
61-90 Days Outstanding	$991	$656 - 1,425
Over 90 Days Outstanding	$1,010	$663 - 1,469
Total	$905	$610 - 1,832
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	73.0%	60.0 - 88.0%
31-60 Days Outstanding	12.8%	6.2 - 16.5%
61-90 Days Outstanding	5.8%	2.6 - 9.6%
Over 90 Days Outstanding	8.4%	2.5 - 12.1%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

WDA REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	73.6%	71.5 - 77.9%
Gross Margin	26.4%	21.5 - 28.2%
Operating Expenses:		
Selling Expenses	6.6%	4.3 - 8.5%
Delivery Expenses	2.0%	1.1 - 2.8%
Warehouse Expenses	2.4%	0.9 - 2.8%
General & Administrative Expenses	11.9%	8.5 - 13.5%
Occupancy Expenses	2.3%	0.0 - 3.6%
Other Operating Expenses	0.4%	0.0 - 0.0%
Total Operating Expenses	25.5%	20.1 - 28.6%
Net Operating Profit	0.9%	-2.0 - 2.5%
Non-Operating Income	2.3%	1.6 - 2.8%
Non-Operating Expenses	1.5%	0.7 - 2.2%
Net Profit Before Tax	1.7%	0.3 - 2.2%
Net Profit After Tax	0.9%	0.2 - 2.0%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	25.5%	20.1 - 28.6%
Total Operating Expense to Gross Margin	97.4%	86.2 - 103.9%
Non-People Expense to Net Sales	11.0%	7.1 - 12.8%
Non-People Expense to Gross Margin	42.1%	32.6 - 45.5%
INTEREST EXPENSE		
Interest Expense to Net Sales	1.1%	0.6 - 1.9%
Times Interest Earned	2.2X	0.1 - 5.0X
BALANCE SHEET		
Cash	5.2%	0.7 - 7.3%
Accounts & Notes Receivable, Trade(Net)	27.8%	21.7 - 33.4%
Inventory	47.2%	37.4 - 55.2%
Other Current Assets	1.7%	0.0 - 1.6%
Total Current Assets	81.9%	70.5 - 91.0%
All Other Assets	18.1%	8.6 - 28.8%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	34.6%	18.7 - 39.1%
Total Long-Term Liabilities	16.4%	1.3 - 24.2%
Total Liabilities	51.0%	19.0 - 66.4%
Total Net Worth	49.0%	26.4 - 76.5%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

WSA REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	10.5%	6.0 - 12.6%
Total Assets to Net Worth	1.9X	1.6 - 3.0X
Net Profit After Tax to Total Assets	4.4%	3.2 - 6.9%
Net Sales to Total Assets	2.8X	2.1 - 3.0X
Net Profit After Tax to Net Sales	1.6%	1.2 - 2.6%
Net Profit Before Tax to Net Worth	12.4%	8.3 - 16.7%
Net Profit Before Tax to Total Assets	6.3%	4.0 - 7.7%
EBIT to Total Assets	9.1%	7.0 - 11.8%
SALES ANALYSIS		
Net Sales($000)	$6,700	$4,147 - 27,532
Percent Sales Change from Prior Year	10.8%	-2.0 - 20.2%
Sales Mix:		
Direct Sales	14.2%	8.4 - 15.4%
Warehouse Sales - Counter and Delivery	85.8%	80.0 - 90.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	54.2%	30.0 - 73.0%
Heating & Cooling Supplies & Equipment	11.2%	0.0 - 10.0%
Industrial P-V-F (Pipes-Valves-Fittings)	23.9%	5.0 - 25.0%
Other Industrial Supplies & Equipment	2.8%	0.0 - 5.0%
Other Products	8.0%	0.0 - 6.8%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	23.5%	20.1 - 25.7%
Gross Margin on Direct Shipments	11.0%	10.0 - 13.1%
Gross Margin on Warehouse Sales	28.0%	23.7 - 29.8%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	2.87X	2.62 - 3.41X
Total Debt to Net Worth	88.2%	57.9 - 202.3%
Current Debt to Net Worth	81.3%	49.7 - 198.3%
Current Assets to Current Debt	2.24X	1.57 - 2.67X
Current Assets Minus Inventory/Curr Debt	0.87X	0.75 - 1.04X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	7.0	4.6 - 8.0
Average Invoice Size	$277	$201 - 301
Average Billing Line	$35.91	$23.54 - 66.22

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

WSA REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$277,149	$211,037 - 296,187
Gross Margin Per Employee	$63,584	$58,500 - 65,268
Average Compensation Per Employee	$30,135	$24,423 - 32,177
Average Fringe Benefits Per Employee	$5,974	$5,113 - 8,000
Compensation & Fringes Per Employee	$36,437	$29,997 - 38,196
Payroll to Net Sales	11.7%	8.9 - 12.4%
Fringe Benefits to Net Sales	2.0%	1.7 - 3.0%
Payroll & Fringes to Net Sales	13.0%	10.6 - 15.7%
Payroll to Gross Margin	46.6%	43.0 - 50.1%
Fringe Benefits to Gross Margin	10.3%	8.3 - 10.9%
Payroll & Fringes to Gross Margin	58.6%	52.2 - 61.0%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	2.99X	2.42 - 3.82X
% of Whse Sales from Non-Stock Items	5.0%	3.0 - 10.0%
Cost of In-Stock Whse Sales/Ave Inventory	3.00X	2.18 - 4.09X
No. of Days Average Inventory Carried	119 Days	86 - 133 Days
Total Cost of Goods Sold to Ave Inventory	3.64X	3.23 - 4.97X
Whse Gross Margin Return on Ave Inventory	122%	119 - 130%
Turn & Earn Profitability Index	91%	86 - 97%
Percent of Firms on LIFO	57.1%	
ACCOUNTS RECEIVABLE		
Average Collection Period	50 Days	42 - 56 Days
Gross Margin Return on Receivables	184%	155 - 220%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	67.3%	60.0 - 69.0%
31-60 Days Outstanding	17.4%	15.1 - 20.5%
61-90 Days Outstanding	6.5%	3.2 - 8.3%
Over 90 Days Outstanding	8.9%	4.4 - 9.5%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$1,297	$1,037 - 1,435
31-60 Days Outstanding	$1,510	$1,344 - 2,332
61-90 Days Outstanding	$1,537	$1,380 - 1,751
Over 90 Days Outstanding	$1,703	$1,298 - 3,109
Total	$1,350	$1,134 - 1,573
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	70.7%	64.6 - 74.3%
31-60 Days Outstanding	16.7%	15.8 - 19.1%
61-90 Days Outstanding	5.4%	3.5 - 6.0%
Over 90 Days Outstanding	7.2%	4.4 - 7.2%
Total	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

WSA REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	76.5%	72.4 - 79.3%
Gross Margin	23.5%	20.1 - 25.7%
Operating Expenses:		
Selling Expenses	4.5%	3.6 - 6.0%
Delivery Expenses	1.4%	0.6 - 1.8%
Warehouse Expenses	2.4%	1.8 - 3.0%
General & Administrative Expenses	6.2%	4.1 - 7.9%
Occupancy Expenses	2.1%	1.5 - 2.5%
Other Operating Expenses	4.3%	0.0 - 1.8%
Total Operating Expenses	20.9%	18.3 - 21.9%
Net Operating Profit	2.6%	1.5 - 3.0%
Non-Operating Income	1.9%	1.4 - 2.3%
Non-Operating Expenses	1.8%	0.9 - 2.2%
Net Profit Before Tax	2.7%	1.9 - 3.0%
Net Profit After Tax	1.6%	1.2 - 2.6%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	20.9%	18.3 - 21.9%
Total Operating Expense to Gross Margin	89.3%	86.1 - 93.3%
Non-People Expense to Net Sales	7.5%	6.4 - 8.3%
Non-People Expense to Gross Margin	30.7%	26.5 - 35.0%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.5%	0.3 - 0.8%
Times Interest Earned	6.3X	3.5 - 8.4X
BALANCE SHEET		
Cash	4.0%	0.1 - 3.5%
Accounts & Notes Receivable, Trade(Net)	34.2%	27.9 - 39.6%
Inventory	50.9%	44.0 - 53.7%
Other Current Assets	1.8%	0.0 - 1.5%
Total Current Assets	90.8%	86.0 - 96.4%
All Other Assets	9.2%	3.0 - 12.9%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	44.6%	31.3 - 57.8%
Total Long-Term Liabilities	7.7%	0.5 - 9.3%
Total Liabilities	52.3%	36.7 - 66.9%
Total Net Worth	47.7%	30.2 - 56.4%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PSDA REGION

	TYPICAL	MIDDLE RANGE
OVERALL PERFORMANCE MEASURES		
Net Profit After Tax to Net Worth	8.9%	5.7 - 13.7%
Total Assets to Net Worth	3.7X	2.3 - 4.4X
Net Profit After Tax to Total Assets	2.6%	1.8 - 5.6%
Net Sales to Total Assets	2.8X	2.3 - 3.3X
Net Profit After Tax to Net Sales	1.0%	0.6 - 2.2%
Net Profit Before Tax to Net Worth	12.6%	8.2 - 23.8%
Net Profit Before Tax to Total Assets	3.4%	2.4 - 6.5%
EBIT to Total Assets	6.6%	5.2 - 10.7%
SALES ANALYSIS		
Net Sales($000)	$8,169	$4,048 - 11,303
Percent Sales Change from Prior Year	18.8%	15.9 - 27.7%
Sales Mix:		
Direct Sales	8.8%	6.1 - 11.0%
Warehouse Sales - Counter and Delivery	91.2%	88.2 - 92.0%
TOTAL SALES	100.0%	100.0 - 100.0%
PRODUCT SALES MIX		
Plumbing Supplies & Equipment	61.7%	15.0 - 97.0%
Heating & Cooling Supplies & Equipment	1.2%	0.0 - 0.0%
Industrial P-V-F (Pipes-Valves-Fittings)	31.5%	0.0 - 50.0%
Other Industrial Supplies & Equipment	3.7%	0.0 - 5.0%
Other Products	1.9%	0.0 - 0.0%
TOTAL SALES	100.0%	100.0 - 100.0%
GROSS MARGIN		
Gross Margin on Net Sales	25.2%	19.7 - 27.8%
Gross Margin on Direct Shipments	8.8%	5.5 - 10.5%
Gross Margin on Warehouse Sales	20.7%	19.9 - 21.5%
ASSET AND FINANCIAL MANAGEMENT		
Current Asset Turn (Sales/Current Assets)	3.53X	2.83 - 3.78X
Total Debt to Net Worth	273.1%	128.9 - 334.6%
Current Debt to Net Worth	138.5%	97.2 - 299.6%
Current Assets to Current Debt	1.77X	1.31 - 2.16X
Current Assets Minus Inventory/Curr Debt	0.86X	0.68 - 1.36X
INVOICE/TRANSACTION DATA		
Billing Lines Per Invoice	5.2	4.0 - 6.0
Average Invoice Size	$234	$106 - 294
Average Billing Line	$37.88	$25.59 - 43.12

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PSDA REGION

	TYPICAL	MIDDLE RANGE
PERSONNEL PRODUCTIVITY		
Sales Per Employee	$306,630	$252,032 - 353,675
Gross Margin Per Employee	$69,983	$63,204 - 93,941
Average Compensation Per Employee	$31,849	$27,887 - 48,235
Average Fringe Benefits Per Employee	$5,895	$3,229 - 7,906
Compensation & Fringes Per Employee	$39,503	$31,926 - 56,141
Payroll to Net Sales	10.2%	7.3 - 12.1%
Fringe Benefits to Net Sales	1.7%	1.2 - 1.9%
Payroll & Fringes to Net Sales	11.9%	9.0 - 14.9%
Payroll to Gross Margin	50.8%	40.4 - 52.1%
Fringe Benefits to Gross Margin	7.6%	4.9 - 9.8%
Payroll & Fringes to Gross Margin	58.0%	50.2 - 59.8%
INVENTORY MANAGEMENT		
Cost of Whse Goods Sold to Ave Inventory	6.11X	3.72 - 7.28X
% of Whse Sales from Non-Stock Items	12.0%	4.0 - 30.0%
Cost of In-Stock Whse Sales/Ave Inventory	5.10X	
No. of Days Average Inventory Carried	60 Days	39 - 67 Days
Total Cost of Goods Sold to Ave Inventory	5.84X	4.50 - 10.73X
Whse Gross Margin Return on Ave Inventory	146%	106 - 180%
Turn & Earn Profitability Index	118%	78 - 145%
Percent of Firms on LIFO	25.0%	
ACCOUNTS RECEIVABLE		
Average Collection Period	60 Days	48 - 72 Days
Gross Margin Return on Receivables	138%	116 - 163%
Aging of Receivable Dollars:		
Current (0-30 Days Outstanding)	66.8%	52.6 - 74.0%
31-60 Days Outstanding	18.8%	7.2 - 24.8%
61-90 Days Outstanding	7.1%	2.4 - 7.8%
Over 90 Days Outstanding	7.3%	4.5 - 10.0%
Total	100.0%	100.0 - 100.0%
Average Account Balance:		
Current (0-30 Days Outstanding)	$4,698	
31-60 Days Outstanding	$4,382	
61-90 Days Outstanding	$2,678	
Over 90 Days Outstanding	$1,897	
Total	$4,532	
Aging of Receivable Accounts:		
Current (0-30 Days Outstanding)	69.2%	
31-60 Days Outstanding	17.6%	
61-90 Days Outstanding	6.1%	
Over 90 Days Outstanding	7.1%	
Total	100.0%	

AMERICAN SUPPLY ASSOCIATION 1989 OPERATING PERFORMANCE SURVEY

PSDA REGION

	TYPICAL	MIDDLE RANGE
INCOME STATEMENT		
Net Sales	100.0%	100.0 - 100.0%
Cost of Goods Sold	74.8%	72.2 - 80.3%
Gross Margin	25.2%	19.7 - 27.8%
Operating Expenses:		
Selling Expenses	5.1%	1.7 - 6.1%
Delivery Expenses	1.3%	0.0 - 2.0%
Warehouse Expenses	2.9%	1.6 - 4.6%
General & Administrative Expenses	11.0%	6.1 - 12.6%
Occupancy Expenses	1.7%	1.3 - 2.4%
Other Operating Expenses	0.8%	0.0 - 1.2%
Total Operating Expenses	22.8%	18.5 - 25.8%
Net Operating Profit	2.4%	0.1 - 4.5%
Non-Operating Income	1.6%	0.3 - 2.3%
Non-Operating Expenses	1.4%	0.9 - 2.5%
Net Profit Before Tax	2.5%	0.8 - 3.5%
Net Profit After Tax	1.0%	0.6 - 2.2%
OPERATING EXPENSE CONTROL		
Total Operating Expense to Net Sales	22.8%	18.5 - 25.8%
Total Operating Expense to Gross Margin	92.5%	83.7 - 99.7%
Non-People Expense to Net Sales	7.4%	6.5 - 7.6%
Non-People Expense to Gross Margin	32.9%	25.2 - 36.3%
INTEREST EXPENSE		
Interest Expense to Net Sales	0.9%	0.6 - 1.7%
Times Interest Earned	2.2X	1.6 - 2.7X
BALANCE SHEET		
Cash	3.6%	1.0 - 1.7%
Accounts & Notes Receivable, Trade(Net)	43.4%	34.2 - 49.9%
Inventory	37.1%	26.7 - 46.2%
Other Current Assets	0.2%	0.1 - 1.3%
Total Current Assets	84.3%	75.0 - 91.0%
All Other Assets	15.7%	7.1 - 24.7%
Total Assets	100.0%	100.0 - 100.0%
Total Current Liabilities	49.5%	31.4 - 57.4%
Total Long-Term Liabilities	19.2%	8.1 - 20.2%
Total Liabilities	68.7%	56.3 - 77.0%
Total Net Worth	31.3%	19.4 - 40.8%
Total Liabilities & Net Worth	100.0%	100.0 - 100.0%

APPENDIX

Survey Methodology/Demographics

In late February, 1989, the American Supply Association mailed strictly confidential questionnaires to all P-H-C-P wholesale members. The primary intent of this survey was to collect detailed financial and operating information from member firms by specific geographic region, sales volume size and type of product emphasis.

Once the questionnaires were received by Industry Insights, all company identification, if any, was removed and a confidential company identification code assigned. The data was then coded, keyed into the computer and edited by Industry Insights financial analysts for accuracy and consistency. Computer processing was performed on all data to insure statistical validity and to produce the financial and operating ratios contained in this study.

In all, 295 completed and usable questionnaires were received by Industry Insights representing well over 1,000 different wholesaler locations (including headquarters). In particular, the statistical sample consists of the following:

	Number of Reporting Firms
All Reporting Firms	300
By Product Emphasis	
Plumbing Supplies & Equipment Firms (those that obtain more than 50% of sales from plumbing products)	154
Industrial Pipe, Valves and Fittings Firms (those with more than 50% of sales from Industrial P-V-F)	43
Plumbing Supplies and Industrial Pipe, Valves and Fittings Firms (those with more than 50% of sales from plumbing and Industrial P-V-F products combined but less than 50% in each category alone)	39
HVAC and Other Emphasis Firms (those companies that cannot be classified in any of the three above groups; or, those firms with less than 50% of sales in combined plumbing supplies and equipment, and Industrial P-V-F products)	64
By Product Emphasis and Sales Volume Size	
Plumbing Supplies & Equipment Firms:	
Sales Under $4,000,000	33
Sales $4,000,000 to $7,000,000	45
Sales $7,000,000 to $12,000,000	33
Sales Over $12,000,000	42
Sales Volume Not Specified	1

Industrial Pipe, Valves and Fittings Firms:
- Sales Under $5,000,000 15
- Sales $5,000,000 to $12,000,000 13
- Sales Over $12,000,000 15

Plumbing Supplies and Industrial Pipe, Valves and Fittings Firms:
- Sales Under $5,000,000 9
- Sales $5,000,000 to $9,000,000 14
- Sales Over $9,000,000 15
- Sales Volume Not Specified 1

HVAC & Other Emphasis Firms:
- Sales Under $6,000,000 20
- Sales $6,000,000 to $12,000,000 20
- Sales Over $12,000,000 24

By Regional Association Affiliation

NEWA (CT, ME, MA, NH, RI, VT) 31
NYSPHW (NY, Excluding New York City) 18
MNYPHS (Long Island and Metro New York) 2
MAWA (DE, E. PA, MD, NJ, DC) 29
CWA (IN, OH, W. PA, WV) 51
SWA (AL, FL, GA, KY, MS, NC, SC, TN, VA) 29
MAD (MI, excluding Upper MI) 20
Metro Chicago, Northern IL 7
MASA (IA, KS, MN, MO, NE, ND, SD, Upper MI, WI, Southern IL) 49
WDA (LA, TX, NM, OK, AR, CO) 30
WSA (ID, MT, WY, AK, OR, WA, HI, Northern CA, Northern NV) 19
PSDA (AZ, Southern CA, Southern NV, UT) 15

Large Volume Firms (those with sales volume of $50 million & over) 11

The statistical information contained in this report is believed to be representative of the companies responding to the survey. All reasonable efforts were taken by Industry Insights, Inc. to assure data comparability within the limitations of accounting reporting procedures. However, the data used in this report are not necessarily based on audited financial statements and the statistical validity of any given number varies depending upon sample sizes and the amount of consistency among responses for that particular ratio. Industry Insights, therefore, makes no representations or warranties with respect to the results of this study and shall not be liable to clients or anyone else for any information inaccuracies, or errors or omissions in contents, regardless of the cause of such inaccuracy, error or omission. In no event shall Industry Insights be liable for any consequential damages.

For those individuals interested in receiving more information related to this report, contact: **Industry Insights, Inc.**, 1585 Bethel Road, Columbus, OH 43220, (614) 442-6626.

Fiscal Year-Ends

Among the participants in each year's **Operating Performance Report** it is somewhat interesting to take note of the patterns of fiscal year-end dates. The table below shows that of the firms responding to the 1989 ASA survey, nearly 60% reported that their fiscal year follows the calendar year. Among the 41.7% of firms having non-December fiscal year ends, the majority fell during either the three months before or the three months after December.

Month of Fiscal Year-Ends

Month	Percentage of Companies
January	4.4%
February	8.5
March	7.2
April	2.0
May	1.4
June	4.4
July	0.7
August	1.4
September	3.8
October	3.8
November	4.1
December	58.3
Total	100.0

Ratio Definitions and Sample Calculations

A primary purpose of this ASA **Operating Performance Report** of the P-H-C-P Wholesaler/Distributor and P-V-F Distributing industries is to provide a basis for comparing your own firm's performance with industry comparatives. In order to do this, it is necessary to calculate your firm's individual company ratios using the same methods that were used to compute the ratios in this report. These definitions appear on the pages which follow.

To further clarify the computational process, this section of the report also contains a completed survey form and sample calculations for a purely hypothetical company.

Note: Those firms that participated in the ASA survey received, absolutely free, a confidential Company Performance Report. This report presents a company's own ratios and data already computed in a manner consistent with those appearing in the industry report, and displayed alongside the appropriate industry comparatives. As a result, participating companies received invaluable information about their own business performance without having to spend time and effort to make the calculations manually.

RATIO DEFINITIONS AND SAMPLE CALCULATIONS

Performance Measure	Method of Computation ( ) Indicates Survey Line #	Suggested Uses	Computational Example For Sample Company
Overall Performance			
Net Profit After Tax to Net Worth (%)	(16) Net Profit After Tax ÷ (27) Net Worth	Overall financial performance from the owner's standpoint.	$69,815 ÷ 1,072,599 = 6.5%
Total Assets to Net Worth (x)	(23) Total Assets ÷ (27) Net Worth	Setting policies concerning amount of debt vs. equity in the business.	$2,369,891 ÷ 1,072,599 = 2.2x
Net Profit After Tax to Total Assets (%)	(16) Net Profit After Tax ÷ (23) Total Assets	Overall financial performance from a management standpoint.	$69,815 ÷ 2,369,891 = 2.9%
Net Sales to Total Assets (x)	(1) Net Sales ÷ (23) Total Assets	Asset management--productivity of total asset base.	$5,884,780 ÷ 2,369,891 = 2.5x
Net Profit After Tax to Net Sales (%)	(16) Net Profit After Tax ÷ (1) Net Sales	Margin management (gross margin and expenses)	$69,815 ÷ 5,884,780 = 1.2%
Net Profit Before Tax to Total Assets (%)	(14) Net Profit Before Tax ÷ (23) Total Assets	Overall financial performance from a management standpoint ignoring tax considerations.	$114,136 ÷ 2,369,891 = 4.8%
EBIT* to Total Assets (%)	[(14) Net Profit Before Tax + (48) Interest] ÷ (23) Total Assets	Same as previous ratio but ignores interest expense (leverage, not operations related)	[[$114,136 + 13,092] ÷ 2,369,891 = 5.4%
Sales Analysis			
Percent Sales Change from prior year	[(1) Net Sales - (39) Previous Years Sales] ÷ (39) Previous Years Sales	Indication of company growth. Caution should be used due to inflationary distortions.	[$5,884,780 - 6,002,478] ÷ 6,002,478 = (2.0)
Asset and Financial Management			
Current Asset Turn (x)	(1) Net Sales ÷ (21) Total Current Assets	Asset management - productivity of current asset base.	$5,884,780 ÷ 2,258,150 = 2.6x
Total Debt to Net Worth (%)	(26) Total Liabilities ÷ (27) Net Worth	Measures overall leverage. Use to set policy of how much debt is employed relative to owner's funds.	$1,297,292 ÷ 1,072,599 = 120.9%
Current Debt to Net Worth (%)	(24) Current Liabilities ÷ (27) Net Worth	A measure of the financial mix of the firm.	$520,042 ÷ 1,072,599 = 48.5%
Current Assets to Current Debt (x)	(21) Total Current Assets ÷ (24) Total Current Liabilities	Good overall measures of liquidity. Used to stay within guides set by suppliers and creditors.	$2,258,150 ÷ 520,042 = 4.3x
Current Assets Less Inventory to Current Debt (x)	[(21) Total Current Assets - (19) Inventory] ÷ (24) Total Current Liabilities	Same as above ratio.	[$2,2258,150 - 983,840] ÷ 520,042 = 2.5x

*EBIT refers to "Earnings Before Interest and Taxes."

RATIO DEFINITIONS AND SAMPLE CALCULATIONS

Performance Measure	Method of Computation ( ) Indicates Survey Line #	Suggested Uses	Computational Example For Sample Company
Transaction			
Billing Lines Per Invoice	(45) Annual Billing Lines ÷ (44) Total Number of Invoices	Gives some indication of invoicing efficiency.	171,872 ÷ 21,484 = 8
Average Invoice Size ($)	(1) Net Sales ÷ (44) Total Number of Invoices	Indicates the typical size of an invoice and thus add-on purchase efficiency.	$5,884,780 x .83 ÷ 21,484 = $227.35
Average Billing Line ($)	(1) Net Sales ÷ (45) Annual Billing Lines	Indicates the size of a typical item billed.	$5,884,780 x .83 ÷ 171,872 = $28.42
Personnel Productivity			
Payroll to Net Sales (%)	(29) Total Payroll Expenses ÷ (1) Net Sales	Overall indicator of payroll cost control. Inflation proof. Compare: overtime; vs. industry; by store	$604,313 ÷ 5,884,780 = 10.3%
Fringe Benefits to Net Sales (%)	(30) Total Fringe & Payroll Taxes ÷ (1) Net Sales	Indicates how much of sales are paid in fringe benefits. Compare: overtime; vs. industry.	$234,303 ÷ 5,884,780 = 4.0%
Payroll and Fringes to Net Sales (%)	[(29) Payroll Expense + (30) Fringe Benefits] ÷ (1) Net Sales	Indicator of all personnel related costs.	[$604,313 + 234,303] ÷ 5,884,780 = 14.3%
Payroll to Gross Margin (%)	(29) Total Payroll Expense ÷ (3) Gross Profit on Sales	Indicates the portion of gross profits that are used in payroll costs.	$604,313 ÷ 1,492,481 = 40.5%
Fringe Benefits to Gross Margin (%)	(30) Total Fringe Benefits ÷ (3) Gross Profit on Sales	Same as above but relative to fringe benefits.	$234,303 ÷ 1,492,481 = 15.7%
Payroll and Fringes to Gross Margin (%)	[(29) Total Payroll + (30) Total Fringes] ÷ (3) Gross Profit on Sales	Indicator of all personnel related costs that are used in gross margin production.	[$604,313 + 234,303] ÷ 1,492,481 = 56.2%
Inventory Management			
Cost of Warehouse Goods Sold to Average Inventory (x)	[(34) Total Warehouse Sales - (37) Warehouse Gross Profit] ÷ {[(19) Inventory + (40) Previous Years Inventory] ÷ 2}	Measure of inventory productivity. Compare to industry, over time or product categories.	[$5,240,136 - 1,396,217] ÷ [(983,840 + 992,313) ÷ 2] = 3.9x
Number of Days Average Inventory Carried	{[(19) Inventory + (40) Previous Years Inventory] ÷ 2} ÷ {[(34) Warehouse Sales - (37) Warehouse Gross Profit] ÷ 365}	Similar in value to above measure. Shows how quickly inventory is moving.	[($983,840 + 992,313) ÷ 2] ÷ [(5,240,136 - 1,396,217) ÷ 365] = 94 days
Total Cost of Goods Sold to Average Inventory (x)	(2) Total Cost of Goods Sold ÷ [(19) Inventory + (40) Previous Years Inventory) ÷ 2]	Shows how many times you were able to "turn over" your inventory.	$4,392,299 ÷ [(983,840 + 992,313) ÷ 2] = 4.4x
Warehouse Gross Margin Return on Average Inventory (%)	(37) Warehouse Gross Profit ÷ {[(19) Inventory + (40) Previous Years Inventory] ÷ 2}	Overall measure of inventory, profitability and productivity. Combines margin and turnover.	$1,396,217 ÷ [(983,840 + 992,313) ÷ 2] = 141.3%

RATIO DEFINITIONS AND SAMPLE CALCULATIONS

Performance Measure	Method of Computation ( ) Indicates Survey Line #	Suggested Uses	Computational Example For Sample Company
Turn & Earn Profitability Index (%)	{[(34) Warehouse Sales - (37) Warehouse Gross Profit] ÷ [(19) Inventory + (40) Previous Years Inventory] ÷ 2} x {[(37) Warehouse Gross Profit ÷ (34) Warehouse Sales] x 100}	Another return-on-investment measure which combines margin and turnover.	[($5,240, 136 - 139,217) ÷ (983,840 + 992,313) ÷ 2] x [(1,396,217 ÷ 5,240,136) x 100] = 103.9
Accounts Receivable			
Average Collection Period	(18) Accounts & Notes Receivable (net) ÷ [(1) Net Sales x (1.0 - (44) % Cash Sales) ÷ 365]	Measuring effectiveness of previous collection policies. Compare to industry and over time.	1,096,734 ÷ [5,884,780 x (1.0 - .17) ÷ 365] = 82 days
Gross Margin Return on Receivables (%)	{[(3) Gross Profit ÷ (1) Net Sales] x 100} x (365 ÷ Average Collection Period)	Indicator of how much gross margin dollars are being generated on your accounts receivables.	[(1,492,481 ÷ 5,884,780) x 100] x [365 ÷ 82] = 112.9%
Operating Expense Control			
Total Operating Expense to Net Sales (%)	(10) Total Operating Expenses ÷ (1) Net Sales	Conventional measure used for controlling total operating costs.	$1,323,621 ÷ 5,884,780 = 22.5%
Total Operating Expense to Gross Margin (%)	(10) Total Operating Expense ÷ (3) Gross Profit	A somewhat more specific measure than the one above.	$1,323,621 ÷ 1,492,481 = 88.7%
Non-People Expense to Net Sales (%)	[(10) Total Operating Expense - [(29) Payroll + (30) Fringes]} ÷ (1) Net Sales	A measure for controlling all operating costs except personnel costs.	[$1,323,621 - (604,313 + 234,303)] ÷ 5,884,780 = 8.2%
Non-People Expense to Gross Margin (%)	{(10) Total Operating Expense - [(29) Payroll + (30) Fringes]} ÷ (3) Gross Profit	Same as above but somewhat finer.	[$1,323,621 - (604,313 + 234,303)] ÷ 1,492,481 = 32.5%
Interest Expense			
Interest Expense to Net Sales (%)	(46) Interest Expense ÷ (1) Net Sales	An indicator of how much debt financing is costing the firm relative to sales.	$13,092 ÷ 5,884,780 = 0.2%
Times Interest Earned (x)	[(14) Net Profit Before Taxes + (46) Interest] ÷ (46) Interest	Indicates the ease in which your company can pay interest costs out of earnings.	[$114,136 + 13,092] ÷ 13,092 = 9.7x

AMERICAN SUPPLY ASSOCIATION
1989 ANNUAL OPERATING PERFORMANCE SURVEY
(Based on 1988 Financial Results)

INFORMATION AND INSTRUCTIONS FOR PARTICIPANTS

With your help, the 1989 ASA Operating Performance Survey (of 1988 financial information) promises to be the best ever, and the easiest in which to participate. For the second consecutive year, you have the option of filling out either the same comprehensive survey form that has been used in the past, or a shorter, less detailed portion of the form. By filling out as much of the information as you can on the form, you will be assured of receiving a detailed confidential analysis report of your business. However, if you are simply unable to fill out the entire form, you can still participate and receive a confidential analysis of your business by filling out as much information as possible on the form and by omitting the entire last page.

GENERAL SUGGESTIONS AND INSTRUCTIONS

To participate and receive free analytical information about your firm, please follow the guidelines below:

1. Determine whether you wish to fill out the entire form, or the shorter version of the form (i.e., with the last page of information excluded).
2. Enter figures from your completed fiscal year which ended nearest to December 31, 1988. Full year data is required. Financial data need not be audited.
3. Dollar amounts should be rounded to the nearest dollar. Eliminate "cents." Columns labeled "Code #" are for internal use only and should be ignored.
4. Please report on the basis of your total firm rather than for individual branches.
5. Refer to the accompanying "Description of Operating Expenses Categories" for help in filling out lines 4 through 10.
6. **IT IS NOT NECESSARY TO FILL OUT EVERY LINE IF YOU DO NOT HAVE IT.**
7. If you prefer, just fill in the information that you readily know and forward your "Income Statement and Balance Sheet" financials (or your most recent annual "Income Tax Form") for your latest available 12 month period along with a copy of the survey form.
8. Send your response in the enclosed postage-paid, self-addressed envelope to:

   Industry Insights, Inc., PO Box 20127, Columbus, Ohio 43220-0127

9. **THE DEADLINE DATE FOR PARTICIPATING IS <u>MAY 15, 1989</u>.**
10. If you have any questions, contact Industry Insights, Inc. at (614) 442-6626.

PARTICIPATE NOW AND RECEIVE INVALUABLE CONFIDENTIAL ANALYSIS INFORMATION ABOUT YOUR COMPANY. YOUR CONFIDENTIAL REPORT WILL BE IN YOUR HANDS BY THE END OF JUNE.

CONFIDENTIAL

AMERICAN SUPPLY ASSOCIATION
1989 ANNUAL OPERATING PERFORMANCE SURVEY
(Based on 1988 Financial Results)

CODE NUMBER: 500

CLASSIFICATION DATA

Ending 12 month period upon which data is based (1) 12/31/88 month/day/year

Number of locations (including headquarters) which are included in the data reflected on this Survey Form. (Do not submit separate forms for branches.) (2) 1

REGIONAL IDENTIFICATION: (Check (✓) only one of the boxes below:)

		Territory	Regional Association Affiliate
	1)	☐ CT, ME, MA, NH, RI, VT	PHWNE
	2)	☐ NY (excluding NYC)	NYSPHW
	3)	☐ Long Island and Metro NY	JCA
	4)	☐ DE, E.PA, MD, NJ, Wa.DC	MAWA
	5)	☒ IN, OH, W.PA, WV	CWA
	6)	☐ AL, FL, GA, KY, MS, NC, SC, TN, VA	SWA
	7)	☐ Michigan (excluding upper MI)	MAD
(3)	8)	☐ Metro Chicago, Northern IL	
	9)	☐ IA, KS, MN, MO, NE, ND, SD, Upper MI, WI, Southern IL	MASA
	10)	☐ LA, TX, NM, OK, AR, CO	WDA
	11)	☐ Rocky Mountain (ID, MT, WY) Pacific NW (AK, OR, WA) HI, N.CA, N.NV	WSA
	14)	☐ AZ, S.CA, S.NV, UT	PSDA

PRODUCT SALES MIX - Please indicate the percentage of your total company sales accounted for by each type of product (estimate if necessary)

(4)	30	Plumbing Supplies & Equipment, Including Plumbing Pipe, Valves & Fittings
(5)		Hydronic & Warm Air Heating & Air Conditioning Supplies & Equipment
(6)	30	Industrial P-V-F (Industrial Pipe, Valves & Fittings)
(7)	30	Other Industrial Supplies & Equipment
(8)	10	Other (Please specify: _____)
(9)	100%	TOTAL

Indicate below to whom any questions regarding this Form should be directed and to whom the final report should be sent. Industry Insights will detach this coupon upon receipt to assure confidentiality.

Name (Questions) _____

CODE NUMBER: 500

Name (Report) Sample Company

Company _____

Address _____

City/State/Zip _____

Phone ( ) _____

PARTICIPATION FEE:

Please enclose your check, payable to ASA, in the amount of $25. Illinois residents include appropriate sales tax.

amount _____ check # _____ date rec'd _____

SEND TO: Industry Insights, Inc.
P.O. Box 20127
Columbus, OH 43220-0127

INCOME STATEMENT ITEMS

Line #		Code #	AMOUNT IN $ (omit cents)
1	Net Sales (Include direct shipments. Deduct claims, returns & allowances but not cash discounts allowed on sales. Exclude sales Taxes.)	(10)	$ 5,884,780
2	Cost of Goods Sold (Include inbound transportation costs. Subtract purchase claims, returns and allowances but not cash discounts on purchases) (FIFO basis)*.	(11)	$ 4,392,299
3	Gross Profit on Sales (Line 1 minus Line 2) (FIFO Basis)	(12)	$ 1,492,481
4	Selling Expenses (refer to definition sheet)	(13)	$ 280,652
5	Delivery Expenses (refer to definition sheet)	(14)	$ 177,206
6	Warehouse Expenses (refer to definition sheet)	(15)	$ 197,090
7	General & Administrative Expenses (refer to definition sheet)	(16)	$ 562,999
8	Occupancy Expenses (refer to definition sheet)	(17)	$ 74,396
9	Other Operating Expenses (refer to definition sheet)	(18)	$ 31,278
10	Total Operating Expenses (Sum of Lines 4 through 9)***	(19)	$ 1,323,621
11	Net Operating Profit (Line 3 minus Line 10) (FIFO)	(20)	$ 168,86
12	Non-Operating Income (Include cash discounts on purchases, interest earned and other income items not directly related to the primary operations of the business)	(21)	$ 34,838
13	Non-Operating Expenses (Include cash discounts allowed on sales, interest paid, losses on sales of fixed assets, and other non-operating expenses or losses not already included above)	(22)	$ 89,562
14	Net Profit Before Taxes (Line 11 plus Line 12 minus Line 13) (FIFO)	(23)	$ 114,136
15	Income Taxes (Federal, State & City)	(24)	$ 44,321
16	Net Profit After Income Taxes (Line 14 minus Line 15) (FIFO)	(25)	$ 69,815

BALANCE SHEET ITEMS

17	Cash (Include savings accounts, CD's & other temporary investments)	(26)	$ 159,182
18	Accounts & Notes Receivable, Trade (Net)	(27)	$ 1,096,734
19	Inventory (FIFO Basis)	(28)	$ 983,840
20	Other Current Assets (Such as prepaid items, supplies, etc.)	(29)	$ 18,394
21	Total Current Assets (Sum of Lines 17 thru 20)	(30)	$ 2,258,150
22	All Other Assets (Any Assets not included above)	(31)	$ 111,740
23	Total Assets (Sum of Lines 21 and 22) (Equal to Line 28) (FIFO)	(32)	$ 2,369,891
24	Total Current Liabilities (Due in less than 1 year)	(33)	$ 520,042
25	Total Long-Term Liabilities (Due in more than 1 year)	(34)	$ 777,250
26	Total Liabilities (Sum of Lines 24 and 25)	(35)	$ 1,297,292
27	Total Net Worth (or Owner's Equity) (FIFO)**	(36)	$ 1,072,599
28	Total Liabilities & Net Worth (Sum of Lines 26 and 27) (Equal to Line 23)	(37)	$ 2,369,891

* If on LIFO, subtract your "Annual Additions to your LIFO reserves" from your cost of goods sold to obtain FIFO cost of goods sold.

** If on LIFO, add your total LIFO reserve to your book net worth to get your FIFO net worth.

*** If your are a Subchapter S Corporation or a partnership, allocate an appropriate management salary for Owner-Managers to the applicable operating expense category(s) and to total operating expense. This would be an amount similar to what would have to be paid to a non-equity owning manager or managers. Doing this will assure that your numbers will be comparable to corporations paying separate management salaries

(OPTIONAL INFORMATION PAGE)

COMPENSATION DATA

LINE #		CODE #	AMOUNT IN DOLLARS (omit cents)
29	Total Payroll Expenses (Include salaries, bonuses and commissions paid to all employees, including owners; exclude fringe benefits and payroll taxes)	(38)	$ 604,313
30	Total of Fringe Benefit Payments and Payroll Taxes (Include Company pension and profit sharing payments plus FICA, Workman's Compensation, Unemployment, Group Insurance, etc., for all employees, including owners)	(39)	$ 234,303
31	Gross Income of the Highest Paid Employee, Including Owners (refer to the person's W-2 statement gross income - as from salaries, commissions and bonuses, but excluding fringe benefits and payroll taxes.)	(40)	$ 50,000
32	Gross Income (as above) of the Second Highest Paid Employee (Including Owners)	(41)	$ 45,000

WAREHOUSE AND DIRECT SALES DATA

33	Dollar Amount of Direct (Drop) Shipment Sales	(42)	$ 644,644
34	Dollar Amount of Warehouse Sales (Counter & Delivery)	(45)	$ 5,240,136
35	Total Sales (Sum of Lines 33 and 34) (Equal to Line 1)	(46)	$ 5,844,780
36	Dollar Amount of Gross Profit on Direct (Drop) Shipments	(47)	$ 96,264
37	Dollar Amount of Gross Profit on Warehouse Sales (Report on FIFO Basis)	(48)	$ 1,396,217
38	Total FIFO Gross Profit (Sum of Lines 36 and 37) (Equal to Line 3)	(49)	$ 1,492,481

ADDITIONAL DATA (VERY IMPORTANT)

39	Previous Year's Net Sales	(50)	$ 6,002,478
40	Previous Year's Ending Inventory (FIFO Basis)	(51)	$ 992,313
41	Average Number of Employees During 1988 (Include all management personnel and all other employees. Convert part-time employees into full-time equivalents depending upon how much they worked relative to full-time employees. For example, two half-time employees each working twelve months would be counted as one employee)	(52)	# 21
42	Percent of Total 1988 Sales that were made for Cash (estimate if necessary)	(53)	17 %
43	Were you on a LIFO Inventory valuation system during 1988?	(54)	Yes ☐ No ☒
44	Total Number of Customer Invoices During the Year	(55)	# 21,484
45	Annual # of Billing Lines on Customer Invoices (estimate if necessary)	(56)	# 171,872
46	Interest Paid in 1988 (also include this amount on Line 13)	(57)	$ 13,092
47	Percent of Warehouse Sales coming from Non-Stock Items (estimate if necessary)	(87)	8 %

DETAIL OF ACCOUNTS RECEIVABLE (YEAR END)

LINE #		CODE #	NUMBER OF ACCOUNTS	CODE #	AMOUNT IN DOLLARS (omit cents)
48	Current (0 - 30 Days Outstanding)	(58)	# 257	(64)	$ 571,339
49	31 - 60 Days Outstanding	(59)	# 47	(65)	$ 154,748
50	61 - 90 Days Outstanding	(60)	# 17	(66)	$ 189,310
51	Over 90 Days Outstanding	(61)	# 28	(67)	$ 181,337
52	Total Accounts Receivable (Sum of Lines 48 thru 51) (Equal to Line 18)	(63)	# 349	(69)	$ 1,096,734

AMERICAN SUPPLY ASSOCIATION

DESCRIPTION OF OPERATING EXPENSE CATEGORIES

Selling Expenses

Selling executive salaries, commissions and bonuses; outside and inside salespeople salaries, commissions and bonuses; other selling personnel (clerical, secretarial and order takers) salaries, bonuses and wages; selling personnel fringe benefits (life insurance; hospitalization; other employee insurance; social security taxes; unemployment taxes; pension trust contributions; profit-sharing trust contributions; other employee welfare; officer's life insurance).

Selling related: supplies; stationery; printing; automobile expense; travel and entertainment; dues and membership; conventions and meetings; education and training; advertising; promotions; brochures; showrooms; merchandise shows; miscellaneous.

Delivery Expenses

Delivery supervisor(s) salaries and bonuses; other delivery personnel (clerical, secretarial, drivers) salaries, bonuses and wages; delivery personnel fringe benefits (life insurance; hospitalization; other employee insurance; social security taxes; unemployment taxes; pension trust contributions; profit-sharing trust contributions; other employee welfare).

Delivery related: supplies; gas and oil; tires; other automotive supplies; towel and uniform services; trucks, automobiles and other equipment repairs and maintenance; insurance (automobiles and trucks); licenses; equipment rental; trucks, automobiles and other equipment depreciation; dues and memberships; education and training; travel and entertainment; delivery services (cartage, freight, express); miscellaneous.

Warehouse Expenses

Warehouse supervisor salaries and bonuses; other warehouse personnel (clerical, secretarial, laborers, and other) salaries, bonuses and wages; warehouse personnel fringe benefits (life insurance; hospitalization; other employee insurance; social security taxes; unemployment taxes; pension trust contributions; profit-sharing trust contributions; other employee welfare).

Warehouse related: supplies; travel and uniform services; equipment repairs and maintenance; insurance (inventory); equipment rental and depreciation; education and training; travel and entertainment; miscellaneous.

General Administrative Expenses

Executive salaries and bonuses; supervisor salaries and bonuses; other salaries and bonuses (including buyers); general and administrative personnel fringe benefits (life insurance; hospitalization; other employee insurance; social security taxes; unemployment taxes; pension trust contributions; profit-sharing trust contributions; other employee welfare; officer's life insurance).

General and administrative related expenses (including purchasing expenses); supplies; stationery and printing; travel and uniform services; telephone and telegraph; postage; automobiles and other equipment repairs, maintenance, and depreciation; insurance (property, automotive, etc.); license, equipment and automobile rental; furniture and fixtures depreciation; automobile expense; travel and entertainment; dues and memberships; conventions and meetings; education and training; employment advertising; collection expense; cash over or short; donations; accounting services; legal services; other services; directors fees; miscellaneous. Also include bad debts written off.

Occupancy Expenses

Facilities management supervisor salaries and bonuses; janitor and maintenance personnel wages; occupancy personnel fringe benefits (life insurance; hospitalization; other employee insurance; social security taxes; unemployment taxes; pension trust contributions, profit-sharing trust contributions; other employee welfare).

Janitor and maintenance supplies; building and building equipment repairs and maintenance; janitor services; building and building equipment insurance; real estate taxes; rent (if applicable); building equipment rental; utilities (power, light, water, heat); building and building equipment depreciations (if applicable); miscellaneous.

Other Operating Expenses

All operating expenses not specified above.